RECENT REMEDIES

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RECENT REMEDIES

A Collection of Over 500 Recent Additions to the American Prescriber's Materia Medica

Compiled by

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AMERICAN DRUGGIST

THE PHARMACEUTICAL BUSINESS PAPER

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PREFACE

THIS compilation of recent remedies is offered to retail pharmacists, not as an authoritative work on the subject but as a ready source of information on the individual remedies described.

It is obvious that such a compilation cannot enter into details concerning each remedy, although in the case of more important items the information has been made fairly complete. Obviously, too, while every effort has been expended to make the information trustworthy and authentic, errors may creep into the text through reliance upon already published matter. The publishers of this volume make no claim regarding the remedial action of any of the drugs listed and do not assume any responsibility for the therapeutic value of any such remedy.

For those who desire still further information on certain remedies, suggestion is made that the manufacturers be consulted. Wherever possible the names of the manufacturers are included in the monograph and the addresses are given at the end of the volume.

On account of the diversity of sources consulted while compiling this material, it is deemed unwise to credit original sources. Much information came from the source of manufacture and when so originating, care has been exercised to modify, where necessary, certain claims of therapeutic virtues.

The newness of the remedies cannot always be assured, although in that direction, it has been our effort to confine the work to items of fairly recent introduction.

It is hoped that the little book will prove serviceable and trustworthy—to the man behind the prescription counter into whose charge is placed the important work of preparing and dispensing—for his ailing fellow-creatures—medicines that are *exactly* what they are expected to be—reliable and effective.

A

ACETBROMANILID.—Antisepsin, $C_6H_4Br.NH(C_2H_3O)$.—Prepared by adding 160 parts of bromine to a solution of 135 parts of acetanilid in glacial acetic acid, and crystallizing the precipitate from hot alcohol. Colorless needles, tasteless, owing to their sparing solubility. Antipyretic and analgesic.

DOSE.—½ to 1 grain (0.03 to 0.065 Gm.) per day.

ACRIFLAVINE.—A hydrochloric acid derivative of diamino-methyl acridine. It is a brownish-red, odorless, crystalline powder, soluble in about 3 parts of water and in alcohol, forming dark red solutions which fluoresce on dilution and which have a bitter taste.

USES.—It is used as an antiseptic. The antiseptic action of acriflavine and proflavine is said not to be weakened by the presence of serum. In the treatment of wounds, it is claimed that acriflavine and proflavine are comparatively free from toxic or irritant action on living tissues and that they do not inhibit appreciably the phagocytic action of the leucocytes on the healing process. Acriflavine is claimed to exert a specific bactericidal action on the gonococcus.

DOSE.—For general application, the solution employed is 1:1000 in physiological solution of sodium chloride, although weaker solutions may be used. Solutions of acriflavine, neutral acriflavine and proflavine may be boiled, or heated in an autoclave to 130° C., without decomposition, but they are sensitive to light and should be stored in amber bottles. Solutions over a week old should be discarded.

ACRIVIOLET is a combination of neutral acriflavine, gentian violet and a mixture of triphenyl methane dyes, containing different numbers of methyl groups.

Acriviolet is believed in laboratory tests to be superior to any one of its ingredients used alone, for the reason that it possesses the combined inhibiting efficiency of these products.

USES.—As a bactericide it is used in aqueous solutions in strengths varying, according to indications, from 1 to 1000 to 1 in 200. It is marketed in powder and tablet form. The powder appears in bottles containing five, ten, twenty-five and fifty grams respectively.

The tablets are marketed in bottles containing fifty tablets of 0.156 Gm. (2.4 grains each).

Manufactured by the National Aniline and Chemical Company.

ADONIGEN is a heart remedy prepared from *Adonis Vernalis* and is marketed by "Chemish-pharmazeutischen Werk Bad Hamburg." It is said

by Dr. V. Noorden to be superior to digitalis as there is less danger of cumulative action. It is marketed in ampules containing 2 cc. Each cc. represents 0.04 Gm. of adonis herb.

AFENIL.—Afenil is an organic calcium compound especially designed for the intravenous administration of calcium.

USES.—It is used for the prevention and treatment of hay fever and conjunctivitis as well as in bronchial asthma, particularly if resulting from functional or spasmodic cause.

DOSE.—One ampule (10 cc.) is injected every few days until 2 or 6 ampules have been given. This course is repeated if desired. In resistant cases 3 or 4 injections may be given on consecutive days.
Each ampule contains 10 cc. of a sterile 10 per cent solution of afenil, which is equivalent to about 0.11 Gm. calcium.
Manufactured by Bilhuber and Co.

AGO-CHOLAN.—Ago-Cholan contains as its active principle, the combined cholic and salicylic acid salts of strontium (2 grains in each tablet) and a small quantity (0.2 grain) of phenolphthalein-diacetate.
Used in gastric oppression caused by insufficiency of the biliary system, hepatic torpor, mild jaundice and also in habitual constipation.

DOSE.—Two tablets two or three times a day after meals. After 2 or 3 weeks, or when the condition has been relieved, the dose is reduced to half.
Manufactured by E. Bilhuber, Inc.

AGOMENSIN, Luteamin.—The luteamin, Agomensin represents a physiologically active substance isolated from the corpus luteum. *Sistomensine* is a similar preparation of the lipoids of the corpus luteum, containing the chalones, insoluble in water. It is given to arrest menstruation.

USES.—It is said to activate the menstrual cycle in case of hypofunction and fosters sexual development where this is retarded. If the absence of menstruation is not due to organic pathology, it will establish appearance of the menstrual flow.

DOSE.—One to three tablets (⅓ grain as supplied) three times daily; or 1 to 4 cc. (contents of 1 to 4 ampules), by deep subcutaneous or intramuscular injections, two or three times a week.
Oral and hypodermic medication may be combined.
Manufactured by the Ciba Company.

AGUTTAN is the salicylic acid ester of oxychinolin. It is insoluble in water and therefore a tasteless substance; melting point 107°. According to Brugsch, its action is similar to that of atophan, lowering of acidity in urine and also a diminution of pain in gout. It can also be used in other painful rheumatism and neuralgic ailments.

AKINETON is the calcium salt of phthalbenzylamido acid. It is recommended for use as an antispasmodic. It is non-toxic and can be taken by mouth in 0.5 to 2.0 Gm. doses.

ALBROMIN is a solution of the valeric acid ester of benzoyl methyl alcohol, to which a small amount of adrenaline is added. Kircher says it is a mixture of cocaine and phenylurethane with the addition of sodium chloride and phenol.

ALCRESTA IPECAC is a form of ipecac alkaloids absorbed with Lloyd's reagent, rendering the drug insoluble in the stomach but soluble in the intestinal secretions. It is especially useful in the treatment of endamebic dysentery.

DOSE.—1 to 3 tablets.

Manufactured by Eli Lilly and Company.

ALKA-SAL is an alkaline salt composed of potassium, sodium, calcium and magnesium salts, so combined as to best maintain the alkaline reserve and stabilize it. Alkasal is stated to increase the excretion of urine and reduces its acidity.

Manufactured by The Maltbie Chemical Co.

ALLISATIN is a new, convenient, odorless and tasteless means for the administration of garlic (Allium Sativum).

Allisatin, developed in the Sandoz Research Laboratories, contains the therapeutically valuable principles of garlic absorbed by charcoal, and is supplied in coated tablets, each representing 1 Gm. (15 grains) of fresh garlic drug. It is tasteless and odorless. When brought into contact with fluid, the active garlic principles are gradually liberated and become therapeutically active.

USES.—Where garlic is indicated.

DOSE.—Adults: Two tablets 3 times a day after meals, to be taken with a little water. The dose may be increased in special cases in 10 or 12 tablets per day. To increase appetite, allisatin should be taken *before* meals.

Manufactured by H. A. Metz Laboratories.

ALUCETOL is a proprietary name for aluminum aceto-lactate. In aqueous solution, its uses are similar to those of solution of aluminum acetate.

ALYPIN is the hydrochloride of 2 benzoxy-2-dimethyl-amino-methyl-1-dimethyl-amino-butane.

It is a white, crystalline powder, odorless, taste bitter, hygroscopic. It is very soluble in water; freely soluble in alcohol and chloroform; insoluble in ether. Its aqueous solution may be sterilized without decomposition by boiling for a period not exceeding five minutes. Two and four per cent aqueous solutions are quite stable, but weaker solutions are likely to become moldy. It should be protected from the air in well-stoppered containers.

USES.—Alypin is a local anesthetic, claimed to be equal to cocaine, but is not a mydriatic. It is said to be less toxic than cocaine, but the evidence is rather conflicting.

DOSE.—Alypin is used in solutions the strength of which is about the same as that of cocaine hydrochloride. In opthalmology, 2 to 4 per cent; in rhinolaryngology, 5 to 10 per cent; in urology, 1 to 4 per cent; in minor surgery, ½ to 2 per cent; in dentistry 2 per cent.

AMIDOXYL is the ammonium salt of o-iodoxyzenzoic acid. Pure o-iodoxybenzoic acid is practically white, but turns pink when exposed to light. The free acid is insoluble in cold water and slightly soluble in hot water. The sodium and ammonium salts are freely soluble. It is an oxidizing substance by virtue of the oxygen combined with the iodine. Amidoxyl is used as an antiseptic and in promoting leukocytosis.
Manufactured by The Abbott Laboratories.

546-AMINE (ROCHE), a new hypnotic, is allyl-isopropyl-barbiturate of diethylamine. It is soluble in water, and alcohol, slightly soluble in glycerin, insoluble in ether and olive oil. Its aqueous solutions are decomposed on boiling. On exposure to air the product slowly loses the diethylamine and becomes insoluble.

AMPHOTROPIN.—Hexamethylene-tetramine Camphorate—$[(CH_2)_6N_4]_3 \cdot C_8H_{14}(COOH)_2$.—A molecular combination of camphoric acid and hexamethylene-tetramine (methenamine U.S.P. X).
A light, white, crystalline powder, soluble in water, alcohol, and chloroform, but almost insoluble in ether and benzene. The aqueous solution is acid.

ACTIONS AND USES.—Amphotropin combines the actions of camphoric acid and hexamethylenamine, but is effective in smaller doses. It acts as a urinary antiseptic, induces diuresis and increases the elimination of uric and pathologic conditions.

DOSE.—8 grains (6.5 Gm.) three times daily.
Manufactured by H. A. Metz Laboratories.

AMYLZYME is an extract containing the digestive enzymes of the fresh pancreas of the hog, having the power to digest starch and protein and to split fats. It is claimed that it is useful in digestive disturbances resulting from deficiency of pancreatic secretion and that it hastens the digestion of starch. It is sold only in capsules, containing 2 grains. It converts from 110 to 130 times its weight of dry starch as the blue iodide to a colorless end-point in ten minutes.

DOSE.—0.113 to 0.266 Gm. (2 to 4 grains) three times daily.

ANABOLIN is a blood-pressure reducing extract. Just as insulin is now produced as a solid crystalline product, although its chemistry is not yet

fully understood, so has this liver extract been prepared as a light, buff colored powder, soluble in water, and issued in the form of tablets under the name of Anabolin, for administration by the mouth. Hepatic extract is also issued in liquid form for injection. It is said that one tablet a day will keep the blood-pressure down to normal, and after some weeks the dose can be reduced or the drug suspended.

The composition of anabolin is not yet known, but it appears certain that it contains no histamine and only the merest trace of choline, so that its depressor effect is not due to the presence of either of these well-known substances, as was at first believed.

ANTILEPROL is a remedy for leprosy prepared from chaulmoogra oil as follows: The oil obtained from the seeds of *Taractogenos Kurzii* is saponified and the fatty acids are washed with water in order to render them odorless. They are then boiled with alcohol which results in the formation of the ethyl ethers. The ethyl ethers differ from the glycerides in that they are easily distilled under vacuum and produce a neutral oil soluble at ordinary temperatures which does not have the usual irritating effect.

ANTIMONY SODIUM THIOGLYCOLLATE.—The compound formed by dissolving antimony trioxide in a solution of a mixture of sodium thioglycollate and thioglycollic acid.

It contains not less than 37 per cent of antimony.

A white or faintly pinkish powder; odorless or having a faint odor of mercaptan; very soluble in water; insoluble in alcohol.

USES.—The same as antimony thioglycollamide. It is more soluble than antimony thioglycollamide, and in higher doses it appears to be less toxic.

DOSE.—From 1 to 2 grains (0.05 to 0.1 Gm.) dissolved in 10 to 20 cc. of sterile water every third or fourth day until from 15 to 25 injections have been given. Its solutions are incompatible with solutions of the fixed alkalis.

Manufactured by Hynson, Westcott and Dunning.

ANTIMONY THIOGLYCOLLAMIDE.—The triamide of antimony thioglycollic acid $Sb(S.CH_2\ CO.NH_2)_3$. It contains not less than 30 per cent of antimony.

A white, crystalline, odorless powder, soluble in about 200 parts of water; somewhat soluble in alcohol; insoluble in ether.

USES.—It is suggested for the treatment of human trypanosomiasis and in trypanosomic diseases of the larger animals. In the doses employed experimentally it was less toxic and less irritating than tartar emetic and the results obtained more favorable.

DOSE.—The usual intramuscular or intravenous dose is 0.08 Gm. dissolved in 20 cc. of sterile water, every second day until from 15 to 25 injections had been given. It is recommended that at least 12 injections be given after the first healing has taken place to insure permanent cure. Its solutions are incompatible with solutions of the fixed alkalies.

Manufactured by Hynson, Westcott and Dunning.

ANTITHERMIN (Phenylhydrazinlevulinic Acid) $C_{(CH_3)}.C_6H_8N_2H.C_5H_8O_3$. In colorless crystals insoluble in water. Used as an antipyretic, but with caution because of depressant action.

DOSE.—3 grains (0.2 Gm.).

ANTIVENIN NEARCTIC, or North American Anti-Snake Bite Serum, is a purified and concentrated serum globulin obtained from horses which have been highly immunized against the bites of North American poisonous serpents.

The process of concentration has two advantages; in that (a) it reduces the amount of serum proteins, and thus eliminates a quantity of serum proteins which are unnecessary and (b) permits one to administer a full protective dose in comparatively small volume of liquid.

It is issued under license from the U. S. Public Health Service, and, before release, each lot must show a sufficient potency to protect against the deleterious effects of venom secreted by the most dangerous North American snakes and especially by the diamond back rattler, which is responsible for the great majority of bites in this country. For practical purposes this serum is polyvalent for North American poisonous snakes. It is marketed in syringe containers each holding enough antivenin to protect against the average amount of venom secreted at any one time by North American serpents.

Manufactured by H. K. Mulford Company.

APINOL is a product obtained in the destructive distillation of the wood of *Pinus palustris* and *Pinus australis.* It is claimed to consist mainly of laevomenthone, $C_{10}H_{18}O$. It is a clear amber-colored oil with an odor resembling that of the pine, having a specific gravity of 0.946 and an approximate boiling point of 182.2°C. It is neutral in reaction.

USE.—Apinol is claimed to be antiseptic, germicide, local anesthetic and expectorant.

It is said to be useful when applied externally to wounds, and when given internally in catarrhal inflammation of the digestive tract or when used by inhalation, to assist in freeing the respiratory passages from accumulated mucus.

DOSE.—Internally, from 0.3 to 1 cc. (5 to 15 minims) on sugar.

Manufactured by The Apinol Corporation, Wilmington, N. C. (White Chemical Co., Wilmington, N. C.).

APOTHESINE.—Chemically this is γ—diethylaminopropyl cinnamate hydrochloride — $(C_2H_5)_2N.CH_2.CH_2CH_2.COO.CH : CH.C_6H_5HCl$. It is produced by the action of cinnamoyl chloride on γ-diethylaminopropyl-alcohol. It occurs as white masses which are composed of small, white crystals; practically odorless; faintly bitter; but producing a sense of numbness of the tongue; permanent in the air. It is soluble in water and alcohol; slightly soluble in acetone or ether. Its aqueous solution is neutral to litmus paper. The solution is stable.

USES.—Apothesine is a local anesthetic of the procaine rather than the cocaine type. While effective for injection anesthesia (especially when combined with epinephrine), it is relatively inefficient when applied to mucous membranes. It is somewhat slower in action than procaine. Its absolute toxicity is less than that of cocaine (as 20 to 15) but about twice that of procaine as (20 is to 40). Apothesine solutions are not injured by boiling.
DOSE.—As a local anesthetic 0.5 to 2 per cent solution generally with epinephrine in sterile water or physiologic solution of sodium chloride. For spinal anesthesia 2 cc. of a 4 per cent solution. For oral administration 0.03 Gm. repeated at half hour intervals.
Manufactured by Parke Davis & Co., Detroit, Mich.

ARBUTIN ($C_{12}H_{16}O_7 + \frac{1}{2} H_2O$) is a glucoside occurring in the leaves of Arctostaphylos uva-ursi, Vaccinum vitis-idaea and many other genera of the family Ericaceaa.
Aubutin occurs in long, glistening, colorless needles, or as a fine, white, crystalline, odorless powder having a bitter taste. It is soluble in 8 parts of water and 16 parts of alcohol; very soluble in water and hot alcohol; insoluble in chloroform, ether and carbon disulphide.
Manufactured by Merck and Co. and the Abbott Laboratories.

ARCODOL is the trade name given by Sharp and Dohme to a palatable combination of cod liver oil extract with malt and hypophosphite.
Arcodol is also supplied with creosote, or with creosote and guaiacol, and also with wild cherry.
Manufactured by Sharp and Dohme.

ARGALDON is a combination of silver albuminate and hexamethylenetetramine marketed in tablet form. A solution prepared from the tablets is used as a gargle in throat affections.

ARGENTOCYSTOL is a silver peptonate with orthodioxybenzol. It contains 7.8-8.1 per cent of silver and 10 per cent pyrocatechin. It is marketed in the form of pencils or tablets for the treatment of gonorrhea.

ARGYRINE is the name given to a new silver preparation. One per cent solution in distilled water or serum when injected subcutaneously, together with fatal doses of *Bacillus pyocyaneus* and *Bacillus anthracis* saved from death the injected animals.

ARGYN is a colloidal compound of silver oxide and serum albumin, containing from 25 to 30 per cent of silver in a form not readily ionizable. It occurs in black, lustrous, hygroscopic granules, forming a colloidal "solution" with water or glycerin. It is used in solution from 10 to 25 per cent strength.

ARHEOL or Santalol is a sesquiterpenic alcohol, chief constituent of sandalwood oil. Arheol contains not less than 98 per cent of santalol.

USES.—The action of arheol is the same as that of sandalwood oil. It is used in urethritis, and cystitis.

DOSE.—From 0.4 to 0.6 Gm. (6 to 10 grains). It is marketed only in capsules containing 0.2 Gm. (3 grains) of which from 9 to 12 capsules are to be taken daily.
Manufactured by P. Astier Laboratories, Paris and New York (Gallia Laboratories, Inc., N. Y.).

ASABROMINE is the dibrombehenic acid salt of calcium. It is a white, odorless and tasteless powder. It is identical in properties and characteristics with sabromine, for which it is suggested as a succedaneum.

ASEPTOSOL, a new antiseptic phenol. The ethereal oil derived from the leaves of Chavica Betle, a plant indigenous to the East Indies, has been found to contain a phenol as its active antiseptic constituent. This phenol has been given the name "aseptosol". This substance is not to be confounded with the already known "chavicol", which is a mixture of bodies derived from the leaves of Chavica Betle and containing aseptosol as one of its constituents. This chavicol is a powerful antiseptic, five times as powerful as phenol as a bactericide. The aseptosol itself is much more active and more stable than is the chavicol mixture. The product is almost pure white and has an odor somewhat faintly reminiscent of phenol. It gives alkali salts which crystallize well, and does not resinify as does its allied product, eugenol.

ASPRIODINE is the name given to the acetylsalicylic acid iodine compound, $C_6H_3IO.CH_3COCOOH$. It is said to possess the pharmacological properties of aspirin and iodine.

DOSE.—2 to 5 Gm.

ATOQUINOL.—"Ciba" is the allyl ester of phenylcinchoninic acid.

USES.—Antirheumatic, antipyretic, analgesic, decongestive, eliminant.

DOSE.—For the relief of pain or to reduce temperature, 4 to 8 tablets (issued in 4 grain tablets) in 24 hours, taken after meals, with a liberal amount of water. This dose may be doubled temporarily, if necessary.
Manufactured by the Ciba Company.

ATOXODYNE is a new non-toxic local anaesthetic, stated to be the benzoate of a mono-amino-alcohol having the formula $C_{10}H_{17}NO_2$. It is considerably less toxic than cocaine or novocaine.

AUROCOLLARGOL is a combination of a colloidal gold solution with an electro-colloidal silver solution. It contains 0.006 per cent of gold and 0.06 per cent of silver. It is employed intravenously in doses of 2 to 5 cc. in the treatment of infections.

AVENYL (Myristoxymercuri-m-hydroxybenzaldehyde) has been under trial in the treatment of leprosy, particularly in cases where this disease was associated with syphilis. Hitherto the troubel has been that when anti-syphilitic treatment is administered to leprosy patients the arsenical preparations employed were apt to make the leprosy conditions worse. By dissolving Avenyl in hydnocarpus oil and injecting the solution subcutaneously, both syphilis and leprosy are attacked at the same time when present simultaneously in one patient.
Avenyl is issued in hermetically sealed vials of 10 cc., presenting 0.25 per cent Avenyl in hydnocarpus oil.
Manufactured by Burroughs Wellcome & Co.

B

BELLAFOLINE represents the total, natural alkaloids of the leaves of Atropa Belladonna, in the form of the soluble salts of malic acid, exactly standardized and stable. The chief active constituent—levo-hyoscyamine—is present in an invariable and constant proportion with the secondary belladonna alkaloids. Bellafoline does not contain atropine.

DOSE.—Orally: One or two tablets or 8 to 16 minims solution three times a day. Hypodermically: One-half cc. to 2 cc. (one-half of one ampule to two ampules) per day.
Manufactured by H. A. Metz Laboratories, Inc.

BENZANILID (Phenylbenzamide, Benzoylanilid), $C_6H_5NHCO_6H_5$—Obtained by the action of benzoyl chloride on aniline in the presence of sodium hydroxide. A pinkish powder, soluble in alcohol, insoluble in water. Used as an antipyretic for children in doses of ½ to 5 grs. (0.03 to 0.32 Gm.).

BENZONAPHTHOL (Benzoylnaphthol, Benzoate of Naphthol, Betanaphthol Benzoate), $C_6H_5CO_2C_{10}H_7$.—Colorless needles, or a white, tasteless, crystalline powder, having a faintly aromatic odor. Almost insoluble in water, very soluble in alcohol and in ether, also soluble in chloroform and in fixed oils. Antiseptic.

DOSE.—4 to 8 grains (0.25 to 0.5 Gm.), repeated frequently.

BENZOSOL is the benzoic acid ester of guaiacol. It is slowly decomposed in the intestinal tract into benzoic acid and guaiacol. It is used as a pulmonary, intestinal and urinary antiseptic.

BENZOTHYMOL is an antiseptic solution containing thymol, eucalyptol, methyl salicylate, menthol, boric acid and benzoic acid in proper proportions to insure best therapeutic results.
It is recommended as a gargle, mouth wash, spray, local application or as a

vaginal douche. Used as a spray, it imparts a fresh and healthy character to the atmosphere of the sickroom.
Manufactured by Sharpe and Dohme.

BENZYL ALCOHOL (Phenmethylol—$C_6H_5.CH_2OH$).—An aromatic alcohol occurring as an ester in tolu and other balsams; the product on the market, however, is produced synthetically.
A colorless liquid with a faint aromatic odor, and a sharp burning taste. When placed on the tongue, it produces numbness, even if only a small quantity is used. It is soluble, 1 cc. in 25 cc. of water, and miscible in all proportions with alcohol, ether and chloroform. One volume of benzyl alcohol should dissolve in 1.5 volumes of 50 per cent alcohol.

USES.—Benzyl alcohol is used as a local anesthetic by injection and by application to mucous membranes. It is practically non-irritant and non-toxic in the ordinary concentrations and doses.

DOSE.—Usually used in the form of a 1 to 4 per cent solution in water or physiological solution of sodium chloride. Such solutions may be sterilized by boiling without danger of decomposition. Pure benzyl alcohol is markedly antiseptic.
Manufactured by Hynson, Westcott and Dunning Co., and others.

BENZYL BENZOATE ($C_6H_5COO.C_6H_5CH_2$).—The benzyl alcohol ester of benzoic acid. It contains not less than 95 per cent benzyl acetate.
A colorless oily liquid above 20° C. It is odorless, or has a faint aromatic odor, and a sharp burning taste. It is insoluble in water or glycerin but miscible in all proportions with alcohol, chloroform or ether.
Benzyl benzoate boils at 340° to 350° C. with partial decomposition. When ignited it burns with a very smoky flame. It is neutral to litmus paper. Specific gravity 1.09 to 1.13 at 15° C.
One of the commercial preparations consists of a solution of 20 Gm. of benzyl benzoate in 78 Gm. of ethyl alcohol to which is added 2 Gm. of powdered castile soap as an emulsifying agent.

USES.—Benzyl benzoate lowers the tone of unstriped muscle, and has been suggested as a remedy against renal, biliary, uterine, and intestinal colic and other spasms of smooth muscle, including angiospasm.
Benzyl benzoate is sometimes administered in capsules, usually mixed with an equal quantity of a fixed oil.
DOSE.—5 to 7 minims (0.3 to 0.5 cc.).
Manufactured by Hynson, Westcott and Dunning Co., and others.

BENZYLCARBINOL, or beta-phenyl-ethylol, is a constituent of oil of rose, is employed as a local anaesthetic, in place of novocaine, being preferable to the latter, because of its more intense action, and its lack of undesired action. It dissolves sparingly in water, about 2 per cent. It has been administered intravenously in form of a 3 per cent emulsion.

BENZYL FUMARATE appears to have advantages over similar benzyl compounds. It is a solid, lending itself readily to presentation in tablet form. It is practically tasteless. It is well received by the stomach, and less apt to nauseate than most of these compounds.
Benzyl Fumarate contains 61.5 per cent of Benzyl Radical as compared to 43 per cent in Benzyl Benzoate. It is more readily hydrolized than most other benzyl esters.

DOSE.—From 2 to 5 tablets (10 to 25 grains) with an additional tablet at half-hourly or hourly intervals, according to the age and needs of the person under treatment.
Manufactured by Abbott Laboratories.

BENZYL SUCCINATE (Dibenzyl Succinate $C_6H_5CH_2.OOC.CH_2.CH_2.COO.CH_2.C_6H_5$).—The dibenzyl ester of succinic acid. It contains not less than 99 per cent of benzyl succinate. A white, or faintly yellowish white, crystalline powder; odorless; almost tasteless, permanent in the air. Almost insoluble in water, soluble in alcohol, ether and chloroform; also soluble in the fixed and volatile oils. Supplied in powder and in 5 grain tablets.

USES.—See Benzyl Benzoate.

DOSE.—5 to 15 grains (0.3 to 1 Gm.)
Prepared by Hynson, Westcott, and Dunning.

BETA-BOROCAINE is (beta-eucaine borate) a water soluble, stable local anaesthetic, ten times as efficient as cocaine hydrochloride.

BETANAPHTHYL BENZOATE.—$C_6H_5COO.(C_{10}H_7)$.—The benzoic acid ester of betanaphthol. It occurs in colorless needles, or as a white, tasteless, crystalline powder of faintly aromatic odor. It darkens with age. It is almost insoluble in water, very soluble in alcohol and ether, and soluble in chloroform and fixed oils. It melts at from 107 to 110° C.
Betanaphthyl benzoate is used internally as an intestinal antiseptic in diarrhea and typhoid fever. It has been used in psoriasis, eczema, scabies in the form of from a 3 to a 10 per cent ointment.

DOSE.—From 0.2 to 0.5 Gm. (3 to 8 grains); maximum dose, single 1 Gm. (15 grains), daily 4 Gm. (60 grains).
Manufactured by Merck and Co., and others.

BETANAPHTHYL SALICYLATE.—$C_6H_4.OH.COO(C_{10}H_7)$, is a white lustrous crystalline powder, colorless and tasteless, melting between 93 and 95° C. It is insoluble in cold or hot water or glycerin, soluble with difficulty in cold alcohol or turpentine, easily soluble in boiling alcohol, in ether and in benzene.

USES.—As of betanaphthyl benzoate. It has the antirheumatic properties of salicylic acid. It is said to be useful in intestinal fermentations, catarrh of the bladder, particularly gonorrheal cystitis, rheumatism, etc.

DOSE.—From 0.3 to 0.5 Gm. (4 to 8 grains) in cachets, milk or emulsion.
Manufactured by The Calco Chemical Company.

BILEIN is a mixture of the essential salts of the bile.
USES.—For stimulating bile-flow. They are mildly laxative.
Manufactured by the Abbott Laboratories, Chicago.

BILE SALTS-FAIRCHILD is a preparation obtained from fresh ox-gall, consisting essentially of sodium glycocholate and sodium taurocholate, in the proportion existing in ox-bile.

USES.—For stimulating bile-flow.

DOSE.—From 0.03 to 0.13 Gm. (½ to 2 grains), from 4 to 5 Gm. (60 to 75 grains), per day.
Manufactured by Fairchild Bros. and Foster, N. Y.

BIQUINYL is a double iodide of quinine and bismuth, containing 50 per cent of bismuth, for subcutaneous injection. It is employed alternately with arsenical compounds in syphilis.

BISMEROL is a mercury-bismuth amalgam in oily suspension for the treatment of syphilis. Each injection consists of 0.09 Gm. of bismuth and 0.03 Gm. of mercury.

BISMOGENOL is a compound of tannin, bismuth and albumin, which is sold in bulk or in tablet form. It is used in the treatment of intestinal catarrh. The preparation is also sold with magnesium peroxide or sodium bicarbonate as *Bismogenol-magnesium* or *Bismogenol-sodium.*

BISMOSOL is a sterilized solution of potassium sodium bismuthotartrate (containing 35 per cent of bismuth [Bi]) 10 Gm.; piperazine, 0.3 Gm., in an aqueous solution of glucose, to make 100 cc. A pale, yellow, syrupy liquid.

USES.—Bismosol is proposed as a means of obtaining the systemic effects of bismuth in the treatment of syphilis.

DOSE.—Administered intramuscularly in doses of 1 cc. every 2 to 7 days until 20 doses have been given. After an intermission of one month, a second course may be given.
Manufactured by Powers-Weightman-Rosengarten Company.

BISMUBRAM is sodium bismuthyltartrate possessing a neutral reaction. It is marketed in the form of ampules containing 0.03 Gm. of the bismuth salt per cc.

BISMUTH CACODYLATE is a compound of bismuth and arsenic which may appeal to practitioners. It is soluble in water, about 1 in 5, and occurs in the form of colorless crystals. It is at present sold in France as Ercédylate, while a cacodylate of bismuth and sodium is sold as Cytarsan.

BISMUTHYL is precipitated bismuth suspended in a solution of glucose, containing 97 per cent of metal. It is used in intramuscular injections in the treatment of syphilis.

BOLUPHEN is stated to be a mixture of kaolin with a polymerization product of oxybenzyl alcohol containing a phenol derivative of formaldehyde in labile combination. It is recommended as a substitute for bismuth and iodoform in wound disinfection.

BOROCAINE (diethyl-amino-ethyl-p-amino-benzoate borate, or procaine borate) is a water soluble, stable local anaesthetic, less toxic than cocaine hydrochloride and free from habit forming tendencies.

BROMEIKON (Tetrabromphenolphthalein Sodium).—The sodium salt of the dibasic dye tetrabromphenolphthalein. It contains about 47 per cent of bromine. A purple, odorless powder; very soluble in water, but only slightly soluble in alcohol.

USES.—Tetrabromphenolphthalein Sodium is used for the roentgenologic examination of the gall bladder. For intravenous injection a solution of 4.5 to 5 Gm. in distilled water is filtered and sterilized by heat. It is then administered in two doses a half hour apart, before breakfast.
Manufactured by Mallinckrodt Chemical Works.

BROMETONE. — Acetone Bromoform — $CBr_3C(CH)(CH_3).CH_3$.-1,1,1-tribrom-2-methyl-propan-2-ol produced by the reaction of acetone on bromoform. Brometone is claimed to have the sedative action of the bromides without the disadvantage of producing brominism.
Brometone occurs in fine, white, prismatic crystals, which possess a camphoraceous odor and taste. It is slightly soluble in water, soluble in alcohol, ether, benzin and most organic solvents. It melts at 167° C. and volatilizes on exposure to air.

DOSE.—5 grains (0.3 Gms.) five times a day. In adults it is claimed that it causes no unpleasant results, produces no disturbance of the digestive organs, and has no appreciable effect on the secretions.
Manufactured by Parke, Davis and Company.

BROMIPIN 10 per cent.—Brominized Sesame Oil. A bromine addition product of sesame oil, containing 9.8 to 11.2 per cent of bromine in organic combinations.
Bromipin acts like the inorganic bromides; but since it yields its bromine more slowly, it is thought to have less tendency to produce brominism. The combination is not broken up in the stomach, but a portion of the bromine is split off as soon as the compound enters the intestine; the remaining compound is readily absorbed, and, as in the case of other fats, it is largely deposited in the tissues where it is slowly split up. Bromipin 10 per cent is said to be more lasting in its action than the bromides. Bromipin 10 per cent is a yellow oily liquid having an oleaginous taste.

DOSE.—1 fluidrachm (4 cc.) which may be increased in cases of epilepsy to from 2 to 8 fluidrachms (8 to 30 cc.). It may be given in emulsion with peppermint water and syrup, or pure, flavored with oil of peppermint.
Marketed by Merck and Company.

BROMSULPHALEIN (Disodium phenoltetrabromphthaleinsulphonate—$O.CO.C_6Br_4.([C_6H_3(OH)SO_3Na]_2)$.—The disodium salt formed by the interaction of tetrabromphthalic acid (or anhydride) and phenol with subsequent sulphonation. It contains from 37 to 38 per cent of bromine.
A white crystalline powder, soluble in water, insoluble in alcohol or acetone. The aqueous solution is almost colorless.

USES.—Bromsulphalein is used as a test of liver function; the amount remaining in the blood stream after intravenous injection, as determined colorimetrically, is considered a measure of liver dysfunction.

DOSE.—0.002 Gm. per kilogram of body weight is injected intravenously in 5 per cent aqueous solution without dilution.
Manufactured by Hynson, Westcott and Dunning.

BROMURAL is a monobromisovalerylcarbamide.

USES.—It is a distinct sedative in various nervous disorders and an effective somnifacient in moderately severe conditions of wakefulness. It is not habit forming, not cumulative, and free from the untoward effects that so frequently accompany the administration of the "bromides" or the stronger hypnotics..

DOSE.—As a nerve sedative, 5 grains (or 1 tablet) several times a day. In sleeplessness, 10 to 20 grains at bedtime.
Manufactured by E. Bilhuber and Co.

BUTESIN $C_6H_4NH_2.COO(C_4H_9)$.—The normal butyl ester of 4-amino-benzoic acid. $C_6H_4NH_2.COOH$.
A white, crystalline powder, odorless and tasteless. It is almost insoluble in water (about 1 in 7,000); soluble in dilute acids, alcohol, chloroform, ether and benzene; also soluble in fatty oils. Butesin is slowly hydrolized when boiled with water.

USES.—The actions and uses of butesin are similar to those of ethyl-amino-benzoate (benzocaine), but it is claimed to be more effective.

DOSE.—Butesin is used as a dusting powder, either pure or diluted. It may be used in the form of troches, ointment, suppositories or dissolved in a fatty oil. Its oil solutions may be sterilized by heat.
Manufactured by the Abbott Laboratories.

BUTESIN PICRATE.—$(C_6H_4.NH_2.COO.C_4H_9)2.C_6H_2(NO_2)_3OH$.—A compound consisting of one molecule of trinitrophenol (picric acid) and two molecules of the normal butyl ester of 4-amino benzoic acid.
It occurs as a yellow, amorphous powder; odorless, taste slightly bitter. One part of butesin picrate is soluble in 1,400 parts of water; also soluble in 100 parts of cottonseed oil; soluble in alcohol, chloroform, ether and benzene.

USES.—Butesin picrate combines the anesthetic action of butesin with the antiseptic properties of trinitrophenol (picric acid). An aqueous solution 1:1,400 produces immediate and complete anesthesia of the eye which lasts from ten to twenty minutes. Butesin picrate is used in the treatment of burns, ulcers and other denuded painful lesions of the skin.
DOSE.—For use a 1 per cent butesin picrate ointment is proposed.
Manufactured by The Abbott Laboratories.

BUTESIN PICRATE DUSTING POWDER contains 5 per cent of the antiseptic-analgesic compound, in a sodium stearate base. It has impalpable fineness, smoothness and basic blandness—qualities so desirable in this class.
Manufactured by The Abbott Laboratories.

BUTESIN PICRATE OINTMENT is a convenient method of utilizing the properties of Butesin picrate, and rendering it easy of application to denuded and painful lesions of the skin.
It contains 1 per cent of the salt in a bland base composed of white wax, paraffin, mineral oil, water and borax.
Manufactured by Abbott Laboratories.

BUTOLAN is beta-benzylphenol carbaminic ester. It is marked in the form of colorless and odorless powder or in crystals. It is recommended as a vermifuge in 0.25 Gm. doses for children from 4 to 12 and 0.5 Gm. doses for older children and adults.

BUTYN $[NH_2.C_6H_4.COO(CH_2)_3.N(C_4H_9)_2]_2.H_2SO_4$) is the normal suplhate of a base resembling that of procaine (paraaminobenzoyl-diethylamino-ethanol); but it differs in that butyn possesses a butyl group in place of the ethyl group of procaine base, and a propanol group in place of the ethanol group.
A colorless, odorless solid which rapidly produces a sense of numbness when placed upon the tongue.
It melts at from 98° to 100°C.
It is insoluble in less than its own weight of water at 20° C. It dissolves slowly in cold water, but rapidly in hot water. It is very soluble in warm alcohol and in acetone, from which it does not readily separate in cooling. It is slightly soluble in chloroform, and insoluble in ether.

USES.—Butyn is a local anesthetic proposed as a substitute for cocaine, particularly in surface anesthesia, as for the eye, nose and throat. On the normal human eye, 0.5 per cent solution of butyn is less effective than a 1 per cent solution of phenacaine (holocaine), but more efficient than a 1 per cent solution of cocaine or a 1 per cent solution of eucaine. Butyn solutions are nonirritant.

DOSE.—For ophthalmolgic work, butyn is generally used in 2 per cent solutions. In nose and throat work, solutions from 2 to 5 per cent are usually employed. Butyn solutions may be sterilized by boiling.
Manufactured by The Abbott Laboratories.

C

CADECHOL is an addition product of camphor with desoxycholic acid. It is a white crystalline powder, melting at 180°, insoluble in water, but soluble in hot alcohol and in alkali, containing 15 per cent of camphor. It contains 28 per cent of camphor and may be used orally whenever that drug is indicated. It passes unaltered through the stomach. It is marketed as tablets each containing 0.1 Gm. of cadechol; claimed to have the therapeutic value of camphor without its drawbacks.

CALCIDIN is claimed to be a mixture of iodine, lime, and starch. In contact with water, the iodine and the lime react to form calcium iodide and calcium iodate.

CALCIUM CASEINATE.—The casein from cow's milk rendered partially soluble by combination with calcium, of which it contains about 1 per cent. It is given in cases of infantile diarrhoea in a mixture of milk and water, approximately 10 Gm. being given in 500 cc. of the mixture, which is boiled before administration. A yellowish-white fluffy powder, having a slightly saline taste, permanent in the air. On agitation with warm water it partially dissolves, forming a pseudo-solution or turbid suspension.

CALCIVEN is a hemostatic for intravenous injection. The solution contains 10 per cent of dried calcium chloride and 2 per cent of ethyldiamine.

CALOMELOL (Colloidal Calomel).—A colloidal form of calomel, containing albuminoids.
A white-gray, odorless and tasteless powder, containing 80 per cent of mercurous chloride and 20 per cent of protein. With water, it forms an opalescent suspension insoluble in alcohol, ether and benzene. (In these suspensions, colloidal bodies are in such an extreme state of subdivision that they were formerly supposed to be in solutions and are still so considered). It is precipitated from its aqueous suspension by acids, the precipitates being redissolved by alkalies.
USES.—The action of calomelol is the same as that of calomel, but it is claimed that it is superior because of its power of forming colloidal suspension in water, acting more rapidly and efficiently, and that it is non-irritant. The indications for its use are the same as for calomel.
Calomel ointment: 28 per cent mercury in the soluble form of calomelol and 2 per cent in the insoluble form.
It is prepared by combining 45 parts of calomelol with sufficient lard to make 100 parts.
DOSE.—Internally, the same as calomel. Externally as a dusting powder, mixed with an equal quantity of starch, or in the form of calomel ointment.
It should be protected from the light.
Manufactured by Heyden Chemical Company.

CAMPHELLA is an internal indication of the elixir type having the following formula: Each fluidounce represents

Fluidextract of Belladonna	1 min.
Camphor	2 grs.
Cinchonine Sulphate	2 grs.

USES.—It replaces the usual rhinitis tablet medication in the treatment of respiratory tract infections.

DOSE.—Teaspoonful (adult) every thirty minutes for three or four doses, or until a feeling of dryness in the throat indicates that the secretions are well under control. From this point, smaller dosage, at longer intervals, serves to hold the secretions in check until absence of further symptoms indicates recovery from the attack.
Manufactured by Pitman-Moore Company.

CAMPHEMOL is a 10 per cent emulsion of camphor. The very fine subdivision of the camphor is accomplished by the use of the dicarbamic acid ester of menthol. It is recommended for use in injections in place of solutions of camphor in oil.
It must not be confused with Camphenol.

CAMPHEMYL is a solution of natural camphor containing 10 per cent of camphor in distilled water, solution being effected by means of methylurethane and monoethylurea. It is a water-white, mobile liquid, smelling strongly of camphor, which is precipitated by dilution with water. On being heated it evaporates, leaving practically no residue. For the injection of camphor—as in cases of collapse—this product represents a distinct advance on camphorated oil, its absorption and action being more intense, while the mobility of the liquid allows of a fine-bore needle being employed, as well as easier cleansing of the syringe.
Camphemyl is supplied in ampoules for injection containing 1 cc. each.

CAMPHOR-GELATINETTES are elastic tablets containing 0.1 Gm. of camphor in a gloco-gelatin kernel which is coated with pure gelatin so treated as to make it insoluble in water and acids. For oral administration of large and continued doses of camphor as a heart stimulant and in pneumonia.

CAMPHOR GELLETS are elastic gelatine pearls, containing 1½ grains camphor, so treated that they pass the stomach undissolved. They are absorbed promptly and completely from the intestinal tract together with the digested gelatine. The camphor content is uniform and will remain constant. Gellets are well tolerated and make large doses of camphor possible.

DOSE.—As a cardiac stimulant and vascular remedy one or two gellets several times a day.
Manufactured by E. Bilhuber, Inc.

CAPORIT.—This substance, formerly known as Hyporit, has been subjected to an examination by J. Herzog, who reports that a freshly prepared solu-

tion, containing 40.3 per cent of available chlorine, after ten days still showed the presence of 37.8 per cent of chlorine. After three months the same solution still showed the presence of 34.8 per cent of chlorine.

CAPROKOL (Hexylresorcinol-S. and D.) is a thick pale yellow liquid, which solidifies on standing at room temperature. It boils at 178° C. It is very slightly soluble in water (1 part in 2,000 parts of water) but readily soluble in alcohol, ether, chloroform, benzene and vegetable oils. It has a slightly pungent odor, a sharp astringent taste, and produces a sense of numbness when placed on the tongue.
Chemically it is hexyl resorcinol, $C_6H_3(OH)_2(C_6H_{13})$, containing not more than 5 per cent of the intermediate product hexylylresorcinol.
USES.—Caprokol is a germicide and is stated to have a phenol coefficient of 45 and to be relatively nontoxic when administered by mouth.
DOSE.—From 0.15 to 0.6 Gm. three times a day. Caprokol is supplied only in the form of an olive oil solution in gelatin capsules.
Capsules Hexylresorcinol-S. and D. 0.15 Gm.: Each capsule contains 0.15 Gm. hexylresorcinol dissolved in olive oil 0.45 Gm.
Manufactured by Sharpe and Dohme.

CARCINOLYSINE is a Japanese cancer remedy which probably contains a ferment as the active ingredient. This ferment is extracted from the Chinese plant "Haisung" (a species of Pinus) and mixed with an oil extracted from Poh. The material when injected into animals and human beings suffering with cancer is reported to diminish the size of the tumors and in 25 to 35 per cent of the cases to effect a complete cure. The treatment consists of 30 injections of 1 to 3 cc.

CARDIAZOL.—A synthetic organic compound penta-methylentetrazol. It is a white crystalline powder, soluble in water, neutral, will not deteriorate, thus permitting definite, controlled dosage.
USES.—Cardiac and respiratory stimulant—absorption and maximum action within a few minutes after subcutaneous or intravenous injection.
Toxic dose is 10 to 20 times the therapeutic dose. It is not cumulative.
Ampules, 1 cc. each (1½ grains) in boxes of 6 and 30.
Tablets, 1½ grains each, in tubes of 10 and bottles of 100.
Powder, vials of 5 and 25 grams.
DOSE.—1 ampule every 1 to 3 hours, or as required, injected subcutaneously or intravenously.
Per os: 1 or 2 tablets several times daily, or 1½ to 3 grains in powder (or as a solution, best in some hot liquid as tea or coffee).
E. Bilhuber, Inc., Agents.

CARDIBAINE is a French preparation occasionally used by American physicians and stated to be pure crystallized strophanthine. Marketed in drops and ampules.

CHINOSOL, or oxyquinolin sulphate, is a powerful, non-toxic antiseptic, somewhat stronger than mercuric chloride and considerably stronger than phenol. It is a feeble germicide, being weaker than phenol and much weaker than mercuric chloride. Chinosol is claimed to have marked analgesic power and to be an efficient deodorant. Chinosol is also marketed in the form of chinosol tablets 0.25 Gm.

CHLORBUTANOL (Trichlor-tertiary-butyl alcohol, CCl C(OH).CH CH.—A white, crystalline, volatile compound having a camphoraceous odor and taste. It is slightly soluble in water and very soluble in alcohol.

USES.—A mild local anesthetic, and for insomnia, vomiting, and spasmodic conditions. The dose is from 5 to 20 grains (0.3 to 1.3 Gm.). A saturated aqueous solution may be used hypodermatically. It is also used as a preservative for solutions for hypodermic injections.
Manufactured by Parke, Davis and Company.

CHLORETONE is a derivative of chloroform and acetone, $C_4H_7OCl_3$ being the chemical formula. It is a beautiful white, crystalline, volatile compound having a camphoraceous odor and taste.

USES.—Chloretone is a hypnotic and nerve sedative. It induces natural, restful sleep. It has advantages over other hypnotics in that it does not depress the heart or respiration unless excessive amounts are given, and it does not cause digestive disturbance.

DOSE.—10 to 15 grains as indicated.
Manufactured by Parke, Davis and Company.

CHLORO-MERCURIC FLUORESCEIN is a urinary antiseptic, formed by the introduction of one atom of mercury into the fluorescein molecule. After intravenous injection, it is excreted by the kidney as rapidly as phenolsulphonaphthalein; in a solution of 1 in 10,000 will inhibit the development of the cloon bacillus, or *Staphylococcus aureus.*

CHLOROPHYLLOSE is a mixture of chlorophyll, organic acid and inorganic silicates and iron albuminate dispensed in tablets for anemia.

CHLOROXYL or cinchophen hydrochloride is a yellow crystalline powder with an astringent, slightly bitter taste, insoluble in water. Chloroxyl is also supplied in the form of 5 Gm. tablets.

CHOLEVAL is the name given to a new silver preparation. One per cent solutions in distilled water or serum when injected subcutaneously, together with fatal doses of *Bacillus pyocyaneus* and *Bacillus anthracis* saved from death the injected animals.

CIBALGINE ("Ciba") is a new non-narcotic preparation, combining the pronounced analgesic properties of dimethyl-amino-phenyl-dimethyl-pyrazolene (amidopyrine), and the sedative properties of small doses of diallyl-barbituric acid (Dial, "Ciba"). It is marketed in 4 grain tablets or cap-

sules, each containing dimethyl-amino-phenyl-dimethyl-pyrazolone (amidopyrine) 0.22 Gm. (approximately 3½ grains). Dial, "Ciba" 0.03 Gm. (approximately ½ grain).

DOSE.—According to requirements. Proportionately large doses are well tolerated by children.

Adults.—One to four tablets or ampules a day, administered at 3 or 4 hour intervals.

Manufactured by Ciba Co.

CINCHAINE or **ISOPROPYL-HYDROCUPREINE** is a local anesthetic for use in urological practice, a 1 to 2 per cent solution being employed to produce anesthesia of the urethra.

CITROPHEN ($C_3H_4(OH)(CONH.C_6H_4OC_2H_5)_3 + 3H_2O$).—Prepared by heating a mixture of p-phenetidin and citric acid in the presence of a dehydrating agent, washing the product with a very dilute solution of sodium hydroxide and crystallizing from water. A white crystalline powder having an acidulous aromatic taste and acid reaction. Uses identical with acetphenetidin.

DOSE.—5 to 10 grains (0.32 to 0.65 Gm.)

COAGULEN is a non-toxic and non-irritating powder derived from normal blood platelets; contains the natural coagulating elements necessary for clotting the blood.

Coagulen readily dissolves in water or normal saline solution. It may be sterilized by boiling without impairment of its action.

USES.—All cases of external and internal hemorrhage due to a deficiency of the coagulating power of the blood. Also, as a prophylactic before operations likely to be attended with severe hemorrhage.

DOSE.—The dose for adults and children is the same.

Ordinarily the following dosage is sufficient, although the strength of the solution may be increased when necessary.

Orally: Five to 10 Gm. of powder dissolved in half to one glass of water, sipped slowly.

Subcutaneously or intramuscularly: 20 cc. of a 3 per cent or 5 per cent solution made with distilled water or with normal saline solution and sterilized by boiling.

Manufactured by Ciba Co.

CODEONAL (sodium-codeine-diethylbarbiturate) is a potent hypnotic.

Codeonal is a mixture of 2 parts codein-diethylbarbiturate and 15 parts sodium diethylbarbituric acid.

The hypnotic dose is small and relatively free from by-effects. It tends to deepen the respirations and reduce their frequency.

USES.—Codeonal is indicated in hysteria, other nervous disorders and insomnia.

DOSE.—2 or 3 tablets as a hypnotic and 1 tablet several times a day as a sedative.

COLLARGOL (Colloidale-Argentum Credé).—Colloidal silver and silver oxide, formed by reduction and stabilized by derived egg-albumin, with which it is possibly partly combined. It contains silver equivalent to approximately 78 per cent metallic silver of which about 2 per cent is ionized. It forms, with water, a fairly stable colloidal suspension.

It occurs in small, hard, brittle, bluish-black scales. With 20 parts of distilled water, it forms a colloidal suspension, black in reflected light, and reddish-brown in transmitted light, which remains stable for months.

Collargol is a feeble local antiseptic but due to its protein content it has been used intravenously with variable results, against general and localized infections, similar to nonspecific protein therapy.

Collargol ointment is prepared by incorporating 15 parts of collargol with 5 parts of water, 10 parts of white wax, and 70 part sof benzoinated lard. The natural color of collargol ointment is reddish-brown. The ointment is good as long as it colors the skin black.

DOSE.—Collargol is employed in carefully filtered solutions (colloidal suspensions) varying in strength according to the intended use; from 10 to 20 cc. of a 2 pr cent solution for intravenous injections and from 0.02 to 1 per cent solution for washes. Collargol solutions should not be sterilized by boiling, but sterile solvents should be used. Locally, it is used in the form of a 15 per cent ointment, from 30 to 60 grains (2 to 4 Gm.) being very thoroughly rubbed into the skin; in the form of 5 per cent dusting powder, of bougies containing 3 grains (0.2 Gm.) and vaginal suppositories and tampons each containing ¾ grain (0.05 Gm.).

CONTRAMINE (Diethylammonium diethylthiocarbamate, $SNH_2(C_2H_5)_2$. $CSN(C_2H_5)_2$).—A crystalline powder freely soluble in water.

DOSE.—(Intravenously), 0.25 Gm. in 10 cc. sterilized normal saline, containing 10 per cent pure glucose; (intramuscularly) 0.25 to 0.5 Gm. in 1.5 or 3 cc. of water. Indicated in syphilis, rheumatism, arthritis, skin diseases, and chronic ulcers.

COPPER FLUORESCEIN.—This is a reddish powder used in trachoma by blowing a minute quantity in the eye. It is prepared by adding a solution of copper sulphate to a solution of fluorescein, collecting, washing and drying the precipitate. Zinc fluorescein has also been prepared and used for the same purpose.

CORAMINE is a permanent water-soluble chemical compound, representing a permanent 25 per cent solution of pyridine-β-carbonic acid diethylamide.

USES.—Pharmacological and clinical experiments show that coramine possesses prompt action. Its stimulating effect upon the circulatory system, when this is pathologically depressed, and on the respiration, is especially pronounced.

DOSAGE.—By mouth: 1 or 2 cc. (16 to 32 minims) in a small amount of water, as often as indicated.

Subcutaneously, intramuscularly, and intravenously: Contents of one or two ampules, repeated, if necessary, at intervals of a few hours.

Manufactured by Ciba Company.

CREOSAL is a French preparation occasionally used by American physicians and stated to be calcium mono-guaiaco-phosphate. It is marketed in the form of syrup, tablets and ampules.

CREOSOFORM.—A neutral combination of formaldehyde and creosote, recommended by Veillet (Paris med., 1922, 12, 190) as a substitute for iodoform. It is a powder with an agreeable odor, and is non-irritant and non-toxic. Applied to wounds it exercises an antiseptic and drying effect, and forms a kind of protective varnish.

CRESATIN Meta-Cresyl Acetate—$CH_3C_6H_4.O(CH_3CO)$ is a colorless, oily liquid, possessing a characteristic odor. It is practically insoluble in water, but soluble in the ordinary organic solvents, miscible with liquid petrolatum, fixed and volatile oils and is volatile with steam.

ACTIONS AND USES.—It is said to possess antiseptic and analgesic properties and is apparently free from toxic effects. It is useful in the treatment of affections of the nose, throat and ear. It may be employed either in the pure form, or in a dilution with oils or alcohol by direct application or spray.

Manufactured by Sharpe and Dohme.

CRESINEOL.—Upon cooling a mixture of a commercial sample of cresylic acid and oil of eucalyptus, T. T. Cocking obtained a number of large transparent crystals, composed of cineol and cresol. Experiments showed that only oil of eucalyptus containing orthocresol responded to crystallization.

This new compound, now registered under the name of Cresineol, contains equal molecules of cineol and ortho-cresol. Its specific gravity is 0.9661 at 60°.

It is soluble in ether, alcohol, chloroform, benzene and other organic solvents. It has a pleasant odor and is not caustic to the skin. Decomposition occurs with subsequent regeneration of cineol upon the addition of an aqueous alkali.

CRYOGENINE ($C_6H_5.NH.NH.CO.NH_2$) is a white crystalline powder; odorless; taste slightly bitter. It is soluble in about 100 parts of water at 20° C.; soluble in ether, acetone, chloroform, and benzene. It melts at 172° C.

ACTIONS AND USES.—An antipyretic in febrile conditions. An analgesic said to be of value in rheumatism, headache, sciatica, gout and in painful conditions generally. After administration, the urine is highly colored.

DOSE.—As an antipyretic, 4 to 30 grains (0.25 to 2 Gm.) per day. As an analgesic, from 15 to 45 grains (1 to 3 Gm.) per day.

Manufactured by A. Lumiere, Lyons, France.

CUPROCIAN is a double cyanide of copper and potassium recommended for tuberculosis.

CUTREN basic bismuth oxyquinolinsulphonate of the composition $Bi_3(C_9H_5NOSO_3)_4$, is a yellow insoluble powder containing about 38 per cent bismuth. It is recommended for use in the treatment of syphilis.

CYARSAL, potassium p-cyanmercurisalicylate, a crystalline powder soluble in water, contains 46 per cent mercury. It is used with neosalvarsan in mixed injections in the treatment of lues.

CYMARIN is a neutral, nonglucosidal substance obtained from *Apocynum cannabinum* or *Apocynum androsemifolium*.
Cymarin occurs as colorless, thick, prismatic crystals, possessing a bitter taste. It is only slightly soluble in cold water, more soluble in hot water. It is with difficulty soluble in benzene, ether and carbon disulphide, but dissolves easily in acetone, alcohol and chloroform. When heated it begins to soften at 130° C and becomes completely liquid at from 135° to 140° C. Cymarin is very sensitive even to weak organic acids, although it is not a glucoside.
USES.—Its uses are much like those of digitalis, but it is not absorbed so readily from the gastro-intestinal tract, at least in animals, and probably in man; hence it is better suited for those cases in which intramuscular or intravenous injection is required to elicit the action promptly. (The usual precautions are necessary.)
DOSE.—Single dose for oral administration 0.0003 Gm. (1/200 grain); daily 0.001 to 0.002 Gm. (1/60 to 1/30 grain). Single or daily dose by intravenous or intramuscular injection, 0.0005 to 0.001 Gm. (1/120 to 1/60 grain). Cymarin is sold only in the form of tablets of Cymarin and ampules of Cymarin Solution.
Manufactured by Farbenfabriken vorm. Friedr. Bayer and Co. and sold by the Winthrop Chemical Company.

D

DELEGON is the name given to antiseptic crayons, containing 10 per cent protargol and 1 per cent tyramin (para-oxyphenlyethylamin). Owing to the solubility of the crayons in water, they gradually and completely dissolve in the secretions of the mucous membrane of the genital tract.
Manufactured by the Winthrop Chemical Co.

DIACETYLAPOMORPHINE is obtained by the action of acetic anhydride on apomorphine hydrochloride. It is said to be only half as toxic but twice as active as the latter.

DIALACETINE is a compound of diallylmalonylurea and the allyl ester of p-acetaminophenol, is found to be an active and useful remedy for epilepsy.
DOSE.—Given ranges from 5 to 10 grains daily.

DIAL LIQUIDUM is a solution of monoethyl urea in water, the compound being rendered soluble by the addition of carbamic acid ethyl ester. It is marketed in dropping bottles containing 15 cc. or in ampules containing 2 cc.

DIBROMIN (Dibromobarbituric Acid—Dibrom-malonyl-ureide).—A colorless crystalline powder; almost odorless; soluble in about 33 parts of water. It contains 50 per cent of available bromine, and is supplied in capsules containing 6 grains, the contents of one capsule in half a gallon of water forming a solution roughly 1:5000. It is reported on a Canadian and American practice as a powerful, non-irritating antiseptic for wounds, abscesses, cystitis, etc.

USES.—It is an antiseptic and germicide for irrigating infected wounds, non-irritating and non-toxic. Use 1 to 10,000 solutions (6 grains per gallon); gradually increase.
Manufactured by Parke, Davis and Company.

DICODID is a new codeine derivative which has been designated dihydrocodeinone. Its chemical composition corresponds to the formula $C_{17}H_{18}NO.O(OCH_3)$. Its pharmacological properties are stated to lie between those of morphine and codeine.

DIDIAL.—"Ciba" represents a chemical combination of diallylbarbituric acid (Dial, "Ciba") and ethylmorphine, with the addition of 1½ grains of Dial, "Ciba."
Each tablet contains:

Diallylbarbiturate of ethylmorphine	⅓ grain
Dial, Ciba	1½ grains

USES.—Didial is said to be especially valuable in the treatment of the most severe forms of insomnia; in cases of violent or maniacal excitement; to facilitate the induction of anesthesia; to produce harmless obstetrical analgesia.
DOSE.—One or two tablets as indicated.
Manufactured by Ciba and Co.

DIETHYLENEDISULPHIDETETRAIODIDE is a new antiseptic with high iodine content. This compound possesses the formula $I_2S(CH_2CH_2)_2SI_2$. A bluish-black powder with garlic-like odor suggestive of mercaptan. It is insoluble and easily decomposed by ether. It contains 10.2 per cent sulphur and 80.92 per cent iodine. Its value depends not on the iodine content but on the amount which it is capable of splitting off, which best takes place in an aqueous deposit in sunlight. 54 per cent of the introduced iodine mass was liberated (through the urine) in 24 hours. The use of this antiseptic is suggested for treatment of parasitic skin diseases, where the simultaneous action of sulphur and iodine is desired.

DIGALEN ROCHE (CLOETTA).—A sterile solution containing in each cubic centimeter 0.3 Gm. of an active derivative of digitalis as isolated by Cloetta, containing 7.5 per cent of alcohol.

It is a colorless or slightly yellowish liquid of an agreeable aromatic odor, with a sweet taste which subsequently becomes bitter.
The active derivative contained in digalen-Roche (Cloetta) is an amorphous, white or slightly yellow powder. It is stated to have a solubility five times as great as that of crystallized digitoxin. It is stated to dissolve readily in alcohol and in chloroform and less readily in ether. It has an intensely bitter taste and causes violent sneezing.
Its uses are the same as for digitalis.

DOSE.—The average dose is from 1 to 2 cc. (15 to 30 minims). The maximum daily dosage is 6 cc. (90 minims). Digalen-Roche (Cloetta) is also suitable for intramuscular and intravenous injection. Intravenous injections of 1 cc. (15 minims) may be repeated at intervals of one-half to one hour as necessary.
Manufactured by Hoffman-LaRoche Chemical Works.

DIGIBAINE is a French preparation occasionally used by American physicians and stated to be an association of digitaline and strophanthine.
Marketed in drops and ampules.

DIGIFOLINE contains the heart influencing glucosides of digitalis-digitoxin, digitalin, and digitaline—only in the natural proportion in which they exist in the leaf. It is free from inert and deleterious extractive substances (saponins) which are present in the tincture and infusion, and which are the frequent cause of gastric disturbance.

USES.—As of digitalis. It is used in tablets, and liquid for oral use; in ampules for subcutaneous, intramuscular and intravenous administration.
One tablet, or 1 cc. (16 minims) of the liquid, represents 1½ grains of standardized digitalis leaves.
Digifoline ampules contain neither alcohol, which renders the injection painful, nor glycerine, which delays resorption of the injected dose.
Manufactured by Ciba Co.

DIGIFORTIS is a fat free tincture of digitalis, prepared by a special process from high grade digitalis leaf. The finished product is physiologically standardized at a point 50 per cent in excess of the U. S. P. standard.

DOSE.—Two-thirds that of the official tincture of digitalis.
Digifortis is supplied in one-ounce amber bottles only, each bottle enclosed in a cardboard carton. Air is excluded from the bottles by carbon dioxide, for the better preservation of the medicament, and each package is dated so that the age of the contents can be told at a glance.
Manufactured by Parke, Davis and Co.

DIGITALONE is a highly purified aqueous solution of digitalis that can be given subcutaneously or intravenously without irritation and with the assurance of obtaining the full effects of the drug.
Digitalone is prepared from the leaves of *Digitalis purpurea* of exceptional quality. In the process of manufacturing Digitalone, the fat and other inert substances are removed without the application of heat or the use of any

chemical capable of impairing the activity of the finished product. Digitalone contains no alcohol; it is a clear solution, light brown in color, and reasonably permanent.
Digitalone is equivalent in activity to tincture of digitalis, U.S.P., Tenth Revision. It is standardized physiologically.
Manufactured by Parke, Davis and Company.

DIGITAN (Purified Extract Digitalis-Digipuratum.)—Digitan is a physiologically standardized preparation of the valuable active digitalis principles, manufactured by the original Digipuratum (Knoll) process.
The careful selection of leaves, the method of preparation, and the accurate standardization all contribute to produce an especially uniform product which retains its activity unimpaired for many years. Digitonin, other saponins, and irritating ingredients of the leaf are removed.
One digitan ampule (1 cc.) or 1 digitan tablet or 1 cc. digitan tincture or 1½ grains of digitan powder is equivalent to 1½ grains of potent dried digitalis leaves U.S.P.
Manufactured by Merck and Co.

DIGITOS is a standardized preparation of water-soluble active principles of digitalis for subcutaneous, intramuscular an intravenous use.
Manufactured by the H. K. Mulford Co.

DIHYDROXYACETONE (Oxantin) is a ketotriose or three-carbon-atom sugar, its formula being $C_3H_6O_3$ or OH.CH-CH-CH-OH. The trioses appear to be more rapidly converted into glycogen than are the hexoses.
It is a white crystalline powder, with a faint odor and a sweetish taste, slowly but completely soluble in its own weight of cold water. It may be used as a sweetening agent.
USES.—Dihydroxyacetone is of value in certain cases of *diabetes mellitus.* Introduced intravenously in a dose of 25 Gm. of diabetic patients with a fair carbohydrate tolerance, very little rise in blood-sugar results.
DOSE.—Given in a daily quantity of 30-50 Gm. (about 1-2 oz.), or even more if necessary. In diabetic coma it is said to reinforce the action of insulin; in such cases it is injected intravenously in doses of 15-20 Gm. in 10-20 per cent solution.

DIMAZON (Diacetylamidoazotoluene — $CH_3.C_6H_4.N:N.C_6H_2(CH)_3N(CH_3CO)_2$).—Dimazon is prepared by the acetylization of amido-azotoluene. It is an orange colored or crystalline powder, insoluble in water but readily soluble in alcohol, ether, chloroform, acetone and benzene, oils, fats and petrolatum. It can be removed from cloth by washing with soap and water. It melts at 75° C.
USES.—Dimazon is generally used in the form of a 2 per cent ointment; it is also employed as a dusting powder (mixed with talcum) or as a solution (in oil).

DIOSAL SODIUM DI-IODOSALICYLATE is a powerful germicide. A 1 per cent solution was found to have a very powerful germicidal action on Staphylococcus aureus.
Diosal is useful.
DOSE.—2 to 5 Gm.

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ECHITONE is stated by the manufacturers to contain echinacea, blue flag and pansy. The drug echinacea has been claimed to be a "specific" for rattlesnake bites, syphilis, typhoid, malaria, diphtheria and hydrophobia. It has also been credited by enthusiasts with curative effect in tuberculosis, tetanus and exophthalmic goiter, and with the power of retarding the development of cancer.

ECKAINE, or n-benzoyl-hydroxy-propyl-norecgonidine ester, is a crystalline base, giving a water-soluble hydrochloride which in neutral solution can be sterilized at 100° C. without decomposition. It is only slightly toxic, acts on the respiratory center similarly to cocaine but to a lesser degree, and is a powerful local anaesthetic. Its administration causes at first a lowering, often followed by an increase, of the blood pressure. The anesthetic action of other norecgonidine derivatives such as hydroeckaine, or the corresponding hydroxyethyl and hydroxyamyl compounds, is much weaker than that of eckaine. The tropic acid ester of homatropine, "mydriasine," acts on the pupil and vagus like atropine, and is an equally powerful mydriatic. In all these respects, it is superior to the benzoic and mandelic esters, and to the tropic ester of dimethylaminopropanol.

ECLO (tablets) are composed of a cod liver oil fraction obtained by isolating and extracting, from Cod Liver Oil U.S.P. quality, a substance in which the vitamin principle is contained and which substance responds to the prescribed U.S.P. test for the presence of Vitamin A.

USES.—As accessory nutritional material in the treatment of deficiency diseases, especially in chilldren. The vitamin content of these tablets is not offered by the manufacturers as a substitute for proper feeding, but as a balancer, furnishing growth-producing and calcium-fixing agent in conditions in which the system requires a specific activator of this kind. In such conditions, it is, of course, important that such proper hygienic conditions as sunlight, fresh air and exercise be maintained and the caloric requirements of the patient met in the food supply.

DOSE.—The recommended dosage of tablets eclo 20 units is as follows: For infants, 1 tablet 6 times or 2 tablets 3 times daily. For easy administration to infants the tablets may be crushed and given on a spoonful of water just before feeding. For children up to seven years of age, 2 tablets 6 times or 4 tablets 3 times daily.
Manufactured by the Pitman-Moore Company.

ELBON is cinnamolyl-p-oxyphenylurea. It is a chemical combination of cinnamic acid with oxyphenylurea; odorless, tasteless, and not irritating to the gastro-intestinal tract. Being soluble in fats, elbon is readily absorbed by the tissues, and exerts its action within the organism either in its original form, or as cinnamic acid and oxyphenylurea.
Cinnamic acid acts either unchanged or by being converted into benzoic acid.

USES.—It is said to cause a pronounced increase in the number of the leucocytes, thereby increasing the defensive force of the organism, and due to its cinnamic or benzoic constituents, possesses antiphlogistic and antiseptic properties. It causes a gradual fall in temperature, checks expectoration and lessens the fetid odor of the sputum in tuberculosis.

DOSE.—One tablet 4 times a day.
Manufactured by the Ciba Co.

ELDOFORM (a brand of Cervitan) is a tannin yeast combination. Eldoform is a light gray, tasteless and odorless powder. It is only slightly soluble in water, organic solvents and dilute acids, but easily dissolves in dilute alkalies.
It is supplied only in palatable tablets, each containing 5 grains (0.3 Gm.), bottles of 25. It is used for relief of gastroenteritis, enterocolitis and dysentery.

DOSE.—Adults, 2 to 3 tablets, three or four times daily; children, 1 to 2 tablets, several times daily. The tablets should be thoroughly chewed. In young children they should be crushed and stirred in some fluid before taking.
Manufactured by the Winthrop Chemical Company.

ELIXIR ALURATE is a pleasant, cherry red elixir containing the hypnotic constituent of allonal or allyl-isopropyl-barbiturate. It is hypnotic and sedative in action only. Allonal also containing a definite amount of amidopyrine which gives to it its marked analgesic properties. Elixir alurate is marketed in 6 oz. prescription bottles.

DOSE.—½ to 2 teaspoonfuls three times a day.
Manufactured by the Hoffmann LaRoche Chemical Works, Inc.

ELIXIR OF ENZYMES is a solution containing pepsin and rennet in a menstruum containing 15 per cent of alcohol.
Elixirs of enzymes is a light yellow, palatable, liquid preparation. One part digests about 70 parts of coagulated egg albumin in two and one-half hours. Eight cc. (2 fluidrachms) coagulates 500 cc. (1 pint) of milk in a few minutes.

USES.—This elixir is claimed to be useful as an aid to digestion and as a vehicle for various drugs.

DOSE.—From 1 to 2 fluidrachms (4 to 8 cc.) with meals; for children in proportion.
Manufactured by Armour and Company.

EMETINE BISMUTH IODIDE is a compound of emetine and bismuth containing from 17 to 23 per cent of anhydrous emetine and from 15 to 20 per cent of bismuth.
Emetine bismuth iodide is an odorless, orange-red powder having a slightly bitter taste.
It is but slightly soluble (with decomposition and liberation of emetine) in water, and dilute acids. It is decomposed by alkaline liquids and by strong acids.

USES.—Emetine bismuth iodide has the action of emetine; but when taken by the mouth, on account of its limited solubility, it is less likely to cause vomiting than the soluble salts of emetine administered by mouth.

DOSE.—The commonly used dose has been 3 grains (0.2 Gm.) daily for four days, either in a single dose at the midday meal, or in divided doses. The drug should be given as dry powder, in capsules or cachets as desired, or in the form of pills or capsules which resist disintegration in the stomach.

EMETINE PERIODIDE ($C_{29}H_{40}N_2O_4I$) contains 38.7 per cent of emetine base, and has been introduced by Martindale as an improvement on emetine bismuth iodide in the treatment of amoebic dysentery. Emetine bismuth iodide is slowly soluble in weak acids, but is attacked and split up by the alkaline secretion of the intestine.

ENZYMOL is an extract prepared from the fresh animal stomach, said to contain the activated gastric enzyme in association with the soluble constituents with which the pro-enzyme is naturally associated. It is free from alcohol, contains a trace of thymol, and has an acidity due to combined hydrochloric acid equivalent to 0.26 to 0.3 per cent of actual hydrochloric acid. It is adjusted to a definite proteolytic power by the U. S. P. assay method for pepsin, and contains 25 per cent of glycerin by weight.
Enzymol is a light straw-colored fluid.

USES.—Enzymol is said to be useful as an application to old sores, ulcers and slow healing wounds. It is said to correct offensive odors, to exert a solvent action on pus and sloughing and necrotic issue, and to impart a healing stimulus. It is said to have been effective in cases which have long remained unhealed and have resisted treatment.

DOSE.—Add ½ to 2 volumes of water.
Manufactured by Fairchild Bros. and Foster.

EPHEDRINE.—Ephedrine is now believed to be β-phenyl-β-hydroxy-a-methyl-ethyl-methylamine. It is thus closely related to adrenalin, and its synthesis has been accomplished.
Its botanical source has been given as *Ephedra vulgaris,* var. *helvetica.* The plant, which widely distributed throughout Europe and Asia, is used entire. About the year 1885, a Japanese worker isolated an impure alkaloid, which was called Ephedrine, was continued by others, but it was not until recently that a pure form of this alkaloid was isolated and its chemical nature investigated.

Pharmacologically, ephedrine has an action on the eye similar to that of atropine, that is, it dilates the pupil. For a long time no other action has been ascribed to it, but quite recently it has been demonstrated that ephedrine has an action similar in many respects to that of adrenalin. Its effects are less pronounced than those of adrenalin, but its action is more prolonged, and it is equally effective when given by the mouth. The average dose of the hydrochloride or sulphate is 0.06 Gm. (1 grain), the dose ranging from ½ to 2 grains. Both these salts are soluble in water.

Ephedrine and its salts are crystalline compounds, readily soluble in water. The various soluble salts of ephedrine now marketed have identical therapeutic action. The chemical structure of ephedrine is similar to that of epinephrine, but its molecule is more stable, its action is somewhat slower and the therapeutic dose is much larger. It has a moderately bitter taste. Pure ephedrine free from its isomer, pseudo-ephedrine is more active than the mixture of the two as occurring in the drug.

Manufactured by Burroughs Wellcome & Co., and others.

EPICARIN (Betanaphtholhydroxytoluic Acid) is a parasiticide occurring on the market in pure and impure form, the latter being used in veterinary practice. The pure product is used in skin affections in 10 per cent solutions or in 10 to 20 per cent ointment.

EPONITE is carbon with great decolorizing property; made from a mixture of coniferous woods, such as pine or cedar, and angiospermous wood, such as poplar or willow. In experimenting, wood in the form of sawdust or shavings was boiled with a solution of calcium or magnesium acetate, then dried and carbonized at a red heat with addition of lime or magnesia. The resulting charcoal is then washed with hydrochloric acid and then with water, dried and again heated to redness. The addition of starch mucilage to the treated wood increased the decolorizing power. Charcoals made at higher temperature approaching white heat, from a mixture of pine and willow treated with calcium acetate and starch, and also of cedar wood treated with calcium acetate were even superior to eponite.

ERGOT ASEPTIC.—A liquid extract of Ergot is standardized by the cock's comb method of assay so that 1 cc. represents 2 Gm. of Ergot.

USES.—The same as those of ergot. Ergot aseptic is intended for intramuscular injection and is marketed in ampules only. The date of manufacture appears on each package and the product is not guaranteed to possess its full potency for more than one year from time of manufacture.

DOSE.—15 to 30 minims (1 to 2 cc.).

ERGOTININE CITRATE.—The citrate of ergotinine, a crystalline alkaloid probably $C_{35}H_{39}O_6N_5$, derived from ergot. A grayish-white, amorphous powder, slowly soluble in water. It is acid to litmus paper. One part of ergotinine dissolves at 18°C. in 292 parts of alcohol. It is insoluble in water.

USES.—The action of ergotinine, when given by mouth or when injected hypodermically, is variable in intensity but represents the action of ergot.

Used in the treatment of headaches and uterine hemorrhage.
DOSE.—1/200 to 1/100 grain (0.00032 to 0.00063 Gm.).
Manufactured by Burroughs-Wellcome and Company and F. Hoffmann-LaRoche and Co.

ERGOTOLE is a liquid extract of ergot, containing the water-soluble oxytocic constituents of the drug.
It is prepared by a process originated in the Sharpe and Dohme Laboratories, and two and one half Gm. of standard ergot are used to produce one cc. of the finished product.
DOSE.—Ergotole may be administered by the mouth, in doses of 15 to 60 minims. Hypodermically, 5 to 20 minims. It is supplied in especially designed one ounce bottles, and in 1 cc. aseptic ampules.
Manufactured by Sharpe and Dohme.

ERICAINE is a solution of tributylalcohol, reinforced with cocaine hydro chloride and recommended as a good anesthetic in dental surgery.

ERYTHROL TETRANITRATE (Merck) ($C_4H_6(NO_3)_4$) occurs as colorless crystalline scales, insoluble in cold water but easily soluble in alcohol. It is obtained by the nitration of the tetratomic alcohol erythrite and belongs to the class of vasodilators further represented by amyl nitrite, nitroglycerin, and sodium nitrite. Erythrol tetranitrate is marketed only as ½ grain tablets in tubes of 24 and bottles of 100 tablets each. In this special tablet form the otherwise unstable and explosive compound is perfectly stable. The tablets, moreover, have been found to retain their full activity after being kept over long periods, an important advantage over other nitrite preparations.
DOSE.—½ to 1 grain (0.03-0.06 Gm.) in tablets (as marketed) every 4 to 6 hours.
Manufactured by Merck Co.

ESSENCE OF PEPSIN-FAIRCHILD is an aromatized, faintly acid liquid obtained by direct extractions from the pig stomach glands, and from the lining membrane of the calf stomach, and containing the entire soluble constituents of the fresh stomach glands—the proteolytic and milk-curdling enzymes, coagulable nucleoproteids, organic and inorganic extractives—and 18.5 per cent alcohol.
USES.—Essence of pepsin-Fairchild is claimed by the manufacturers to be of value in disorders of stomach digestion, as a vehicle for administration of drugs and in the preparation of whey and other milk food for the infant and invalid.
DOSE.—1 fluidrachm (4 cc.) or more.
Manufactured by Fairchild Bros. and Foster.

ESTIVIN is "an extract of Rosa Gallica, containing no alcohol or foreign ingredients." It is used in the treatment of hay fever.
Marketed by Schiefflin & Co., N. Y.

ETHYLENE DIAMINE ($C_2H_4(NH_2)_2$).—Prepared by heating ethylene bromide with an excess of alcoholic ammonia, filtering, evaporating to dryness and distilling the residue with potassium hydroxide. Used as a solvent for the false membrane in diphtheria in 2 per cent solution. Contains 99 per cent of bromine.

DOSE.—6 drops three times a day. Used in epilepsy.

ETHYLENE FOR ANESTHESIA ($CH_2.CH_2$).—It contains not less than 98 per cent by volume of ethylene.

Ethylene for anesthesia is a colorless gas possessing a slightly sweet odor and taste which is offensive to some. It is somewhat lighter than air. Pure ethylene is solid at below —169.4° C. and boils at —103.9° C. The gas is inflammable and a mixture of it and oxygen explodes when brought in contact with a flame or an electric spark.

USES.—A considerable number of trials give promise that ethylene is of value for the production of surgical anesthesia and that it has advantages over nitrous oxide. These advantages are stated to be equally rapid but more pleasant induction, satisfactory relaxation without cyanosis or sweating and rapid recovery.

DOSE.—Ethylene for anesthesia is supplied in compressed state in metal cylinders. For use the gas is passed in an inhalation apparatus and is then inhaled with or without admixture of oxygen. The concentration employed for surgical anesthesia is generally 90 per cent of ethylene and 10 per cent oxygen, though after a prolonged period of anesthesia a deep anesthetic state may be maintained on 80 per cent ethylene. To avoid accidental explosion, ethylene for anesthesia must not be brought in contact with a naked flame or an electric spark.

Manufactured by the U. S. Industrial Chemical Company, New York, and others.

ETHYL SALICYLATE.—$C_6H_4.OH.C.O.O.(C_2H_5)$.—The salicylic ester of ethyl alcohol analogous to methyl salicylate (oin of wintergreen).

A transparent, colorless, volatile liquid, possessing a pleasant characteristic odor and taste.

ACTIONS AND USES.—Ethyl salicylate has the same action as methyl salicylate, but is said to be less irritant and less toxic.

DOSE.—From 0.3 to 0.6 cc. (5 to 10 minims) three or four times a day.

Its specific gravity is 1.132 at 20°C. and it boils at from 230° to 232°C. It is insoluble in water, but soluble in alcohol.

Manufactured by Merck and Company, and Parke, Davis and Company.

EUBARYT is a hydrophile colloid of barium sulphate used in X-ray diagnosis.

EUCODAL is a new hypnotic derived from thebaine. Its chemical structure is like morphine and it is said to be superior to morphine as a narcotic.

EUDOXIN (Tetra-iodophenolphthalein Bismuth).—A bismuth salt of nosophen containing about 52.9 per cent of iodine and 14.5 per cent of bismuth. Odorless, tasteless, insoluble powder, used as an intestinal antiseptic in doses of three to eight grains (0.2 to 0.5 Gm.).

EUDRALIN, a new local anesthetic, is reported to be a highly active combination of adrenaline and *p*-amidobenzyldiethylaminoethanol. A 1 to 5 per cent solution is used for the production of local anesthesia.

EUGALLOL.—Monoacetate of Pyrogallol, a liquid with ⅓ acetone. Efficacious as a paint, pure or diluted, in psoriasis and obstinate chronic infiltrated eczema.
Manufactured by E. Bilhuber, Inc.

EUGOFORM (Acetylized, Methylene Diguaiacol).—Prepared from guaiacol by the action of formaldehyde and acetylization. Used as an antiseptic in form of a dusting powder and ointment.

EUPHORIN (Phenyl Urethane) is a colorless, crystalline powder, soluble in alcohol and ether, slightly soluble in water. Prepared by the interaction of aniline and ethyl chloroformate purified by recrystallization from diluted alcohol. Antipyretic, antiseptic, antirheumatic, and analgesic.
DOSE.—8 grains (0.5 Gm.), equivalent to 15 grains (1 Gm.) of antipyrine.

EUPHTHALMINE is a synthetic mydriatic—the hydrochloride of n-methyl-vinyl-diacetonalkamine ($C_{17}H_{25}O_3O.HC_1$). It occurs as a stable snow-white crystalline powder, very soluble in water, and soluble in about two parts of boiling absolute alcohol, separating again on addition of ether in crystalline aggregates. The salt is anhydrous; it melts at 183°-184°C., and begins to run together at 131°C. It is used in 5 or 10 per cent solution, dilating the pupil and paralyzing the accommodation as rapidly and as completely as homatropine. The effects disappear more quickly after the use of euphthalmine than after homatropine.
The salicylate ($C_{17}H_{25}O_3N_1C_6H_4$ (OH) COOH) is prepared by mixing equal molecular weights of euphthalmine and salicylic acid in absolute ether-alcohol solution, and recrystallizing. It melts at 115°-116°C., and is very readily soluble in water.

EUPYRINE (Vanillin-ethylcarbonate-paraphenetidin). — Light yellow, needle shaped crystals, tasteless and having a faint odor of vanillin. Used as a non-toxic antipyretic in doses of from 15 to 30 grains (1.0 to 2.0 Gm.) once or twice daily.

EURESOL (Resorcin Monacetate) $CH_3.CO.O.(C_6H_4.OH)$.—The acetic acid ester of resorcinol, $C_6H_4(OH)_2$, 1:3.
A thick, yellow, oily liquid, boiling at 283°C. and soluble in acetone.
ACTIONS AND USES.—Its action is similar to that of resorcinol, but milder and more lasting because of the gradual liberation of the phenol.

Euresol is said to be useful in acne, sycosis, chilblains, and particularly in the treatment of alopecia and seborrhea. Applied pure, in acetone solution, and as a 5 to 50 per cent ointment. For scalp lotions, from 3 to 5 per cent alcoholic solutions are used.

EUROPHEN (Di-isobutyl-ortho-cresol-iodide) is a yellow amorphous powder having an aromatic odor; soluble in alcohol, ether, and fixed oils, but insoluble in water. Used as an antiseptic dusting powder or in 5 to 10 per cent ointments. (Similar to thymol iodide.)

EXALGINE (Methylacetanilid) $C_6H_5N(CH_3)CH_3CO$, or $C_9H_{11}NO$.—Antipyretic, analgesic, and antispasmodic.

DOSE.—3 to 6 grains (0.2 to 0.38 Gm.), not more than 12 grains being given in 24 hrs.

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FAVIIZID (Flavicid) is the name applied to an acridin coloring matter. Chemically it is known as 2, 7-dimethyl-3-dimethylamino-6-amino-10 methylacridin chloride. It is claimed to be able to destroy the staphylococcus and diphtheria microorganisms in solutions 1-320,000.

FELAMINE (brand of methenamine cholate) is an association of cholic acid and methenamine (hexamethylene tetramine). Each tablet contains 0.3 Gm. of the methenamine salt of cholic acid with a slight excess of methenamine.

USES.—In hepatic congestion, hepatic insufficiency, jaundice-catarrhal and chronic constipation.

DOSE.—In acute cases: One to three tablets three times daily. For prolonged treatment: One Felamine tablet three times daily.
Manufactured by H. A. Metz Laboratories, Inc.

FEROVARIN contains 1/30 gr. of desiccated thyroid combined with desiccated entire ovary and the salts of the blood plasms in physiological proportions.

USES.—To increase red corpuscles and hemoglobin content of blood in anemia and chlorosis.

DOSE.—1 or 2 tablets or capsules 3 times daily after meals.

FERROPHYTINE is a combination of the neutral colloidal salt of acid calcium-magnesium of inosit phosphoric acid, phytine, with iron. It contains about 7½ per cent iron and 6 per cent of vegetable phosphorus, in nontoxic, assimilable form. It unites the tonic effects of vegetable phosphorus with the blood-forming action of iron.

Ferrophytine does not affect the teeth, as do other iron combinations. It is insoluble in gastric juice, and therefore causes no gastric disturbance. It becomes soluble in the intestinal ferments, forming an assimilable ferric hydroxide.

USES.—For iron and phosphorus medication as in anemia, debility and anorexia.

DOSE.—One or two pills, 3 or 4 times daily, after meals and at bedtime. This dose may be increased, if desired.

Manufactured by Ciba Co.

FERRO-SAJODIN (Ferioben- Ferro-sajodin) is a basic, ferric iodobehenate, having the approximate formula $(Fe(OH)(C_{21}H_{42}ICOO)_2$, and containing at least 5 per cent of iron and at least 24 per cent of iodine. Ferro-sajodin has the actions of iodides and iron. It is claimed to be more stable and palatable than ferrous iodide, not to injure the teeth or to disturb the gastro-intestinal tract, and that it is free from a constipating tendency. Ferro-sajodin is a reddish-brown, odorless and tasteless impalpable powder; insoluble in water or alcohol; slightly soluble in chloroform, ether and warm fatty oils.

DOSE.—For children from 4 to 8 grains (0.25 to 0.5 Gm.) three times daily. Ferro-sajodin is sold in the form of tablets only. It is indicated in the conditions in which iron and iodides are employed, such as anemia, rickets, syphilis, chronic bronchitis, and arteriosclerosis with anemia in doses from 8 to 15 grains (0.5 to 1 Gm.) daily.

Distributed by The Winthrop Chemical Company, Inc.

FIBROGEN is a highly purified tissue fibrinogen isolated according to the methods of Dr. C. A. Mills, University of Cincinnati Medical School, free from albumin and extraneous protein matter.

As the lung is the most richly supplied with the physiological protective mechanism, acting to prevent hemorrhage, lung tissue is utilized as the source from which fibrogen is obtained.

Fibrogen is indicated in all types of bleeding, both internal and external, excepting that from open arteries. In the treatment of hemophilia it is of distinct value.

Fibrogen may be administered either orally or subcutaneously in dosage of 1 cc. for each 75 pounds of body weight.

Orally, fibrogen in 3 cc. dosage is the most convenient of all hemostatics. Care must be taken, however, to avoid the possibility of its destruction by the gastric juices, and for this reason oral administration is only effective on an empty stomach and in a full glass of ice water.

Manufactured by the Wm. S. Merrell Company.

FLAVINE COMPOUNDS.—The following are the principal acridine dyes at present used medicinally:

Acriflavine.—3:6-diamino-10-methylacridinium chloride.

Proflavine.—3:6-diamino-acridinium sulphate.

Homoflavine.—Diamino-dimethyl-methylacridinium chloride.
Acridine Yellow.—3 :6-diamino-2 :7 :10-trimethyl-acridinium nitrate.
Brilliant Iminophosphine.—3 :6-diaminodimethyl-2 :7 :10-trimethylacridinium nitrate.
Argoflavine.—The silver salt of acriflavine.
Septacrol.—A German make of homoflavine. Under the trade-name of Diphthosan, pastilles are made for treatment of diphtheria carriers.
Trypaflavin.—The original German name for acriflavine.

FLUMERIN is the sodium salt of hydroxymercurifluoresceine. It is used as an antiseptic.

FLUORESCEIN (Resorcinolphthalein) (a term not correct but commonly used) $(C_6H_3OH)_2$: $C.C_6H_4.COO$.

USES.—The soluble sodium salt of fluorescein (fluorescein 2 Gm., sodium bicarbonate 3 Gm. water to make 100 cc.) has been used for the diagnosis of corneal lesions and the detection of minute foreign bodies embedded in the cornea.

FORMICIN is an equimolecular compound of formaldehyde and acetamide. It is yellowish syrupy liquid with a faint formalin odor and an acid, slightly bitter taste. It is soluble in alcohol and water. The solution in water slowly evolves formaldehyde gas at room temperature, hence its use as a local antiseptic. It is practically non-toxic.

FORMITOL TABLETS, according to the manufacturer, contain ammonium chloride, benzoic acid, citric acid, guaiac, hyoscyamus, menthol, paraformaldehyde and tannic acid.

FORTOSSAN is a combination of phytine, with lactose (sugar of milk), and possesses all the exceptional natural nourishing and strengthening properties of phytine.

USES.—It supplies the organism with the required amount of phosphorus in a concentrated assimilable and non-toxic form, building up the bone tissues, and increasing the body weight.

DOSE.—As indicated on package.
Manufactured by Ciba Co.

G

GALLOBROMAL (Dibromgallic Acid $C_6Br_2(OH)_3COOH$) is a substitution compound of gallic acid. It is used in place of potassium bromide as a sedative in cases of epilepsy in doses of 10 to 30 grains (0.65 to 2.0 Gm.).

GASTRON is a solution of the gastric tissue juice obtained by direct extraction from the mucus of the fresh stomach of the pig and containing the activated principles of the gastric cells, the enzymes and the associated organic and inorganic constituents in an acid aromatized menstruum containing 25 per cent glycerin by weight. It has an acidity corresponding approximately to 0.25 per cent absolute hydrochloric acid, and 1 cc. dissolves 200 Gm. coagulated egg albumen under standard conditions.
Gastron is a viscid, slightly opaque, straw-colored fluid. Heat and strong alcohol cause coagulation of gastron.

USES.—Gastron is claimed to exhibit the characteristic enzyme properties of gastric secretion. It is designed to present in stable form a complete gastric gland extract for use in disorders of gastric functions.

DOSE.—From 1 to 2 fluidrachms (4 to 8 cc.) diluted with a little cold water or with acidulated water. It may be administered before, in divided doses during, or after meals.
Manufactured by Fairchild Bros. and Foster.

GENTIAN VIOLET MEDICINAL.—A mixture of pentamethylpararosaniline and hexamethylpararosaniline chlorides.
A dark green ("bronze") powder or greenish glistening pieces having a metallic luster. It is soluble in alcohol or chloroform; insoluble in ether. Its solution in alcohol or chloroform has a deeper hue than the same strength aqueous solution. Concentrated sulphuric acid dissolves methyl violet with an orange to brownish-red color; on slowly diluting this solution in distilled water, the solution assumes a brown, then green and finally a blue color. Gentian violet is stated to possess properties of great penetration; to be bactericidal, also bacteriostatic in vivo toward the selective organisms. Its chief application has been in the treatment of affections of the pleural cavity and of the joints particularly in empyema and arthritis—affections in which staphylococci, B. pyocyaneus and B. diphtheriae are the causative agents. Intravenous injection of the dye in doses of 0.005 Gm. per kilogram of body weight causes marked cyanosis, which persists for a few hours after injection, owing to the intense color of the dye.

DOSE.—For direct application, a solution of from 1:500 to 1:1000 may be employed for instillation, a 1:10,000 solution. For intravenous use, Young and Hill recommend 0.005 Gm. per kilogram of body weight, injected in 0.5 per cent dilution.

GERMANIUM DIOXIDE.—A salt, GeO_2, of the rare metal germanium. A white powder, only slightly soluble in water, 0.4 per cent being a saturated solution at ordinary temperatures. Freely soluble in alkalis. Suggested by Muller et al. for treatment of anemia. Injection of a 0.4 per cent solution produces in animals a great improvement in the red corpuscles of the blood, without toxicity.

GLYCERO-COD (Eskays) is an emulsion of cod liver oil with calcium glycerophosphate.

Each tablespoonful contains four grains of calcium glycerophosphate in acid state, and two fluidrachms of cod liver oil being 50 per cent of the total volume.

USES.—The preparation supplies calcium and phosphorus in an easily absorbable form, together with the growth-promoting vitamin A and the antirachitic D, which greatly influence calcium and phosphorus metabolism.

DOSE.—Two teaspoonfuls to a tablespoon according to age.
Manufactured by Smith, Kline and French Company.

GLYCOTAURO is a concentrated ox-bile, freed from bile pigments, standardized to contain 50 per cent of the natural mixture of sodium glycocholate and sodium taurocholate. Each gram represents approximately 15 cc. of fresh ox-bile.

USES.—For stimulating bile-flow.
Manufactured by Hynson, Westcott and Dunning.

GUABRONCHIN is a remedy recommended for tuberculosis of the lungs and all other diseases of the air passages. It is a product of the combination of sulphonated guaiacol with the dialysates of Thymus serpyllum and Thymus vulgaris.

DOSE.—A tablespoon 3 times a day, half the dose for children.

GUAETHOL (Ajacol, Thanatol, Pyrocatechin-mono-ethyl ether) is an oleaginous fluid, congealing to a crystalline mass at low temperatures, soluble in alcohol and ether. Similar to guaiacol in medicinal properties.

DOSE.—2 to 4 grains (0.13 to 0.25 Gm.).

H

HEMOSTATIC SERUM (Hemoplastin).—Hemostatic serum is a sterile blood derivative originated by Dr. V. A. Lapenta and composed principally of prothrombin, anti-anti-thrombin, and thrombokinases, in physiologically balanced solution; it is used to control hemorrhage due to or associated with defective coagulability of the blood. It is a clear, light-amber or colorless liquid, and is adapted to any desired method of administration.

DOSE.—The average dose of Hemostatic Serum is 2 cc. to 5 cc. given intramuscularly or subcutaneously. In hemophilic patients, however, or in any case in which excessive bleeding is feared, the 5 cc. dose should be used. The injections may be repeated every four to six hours until perfect control is established.
Manufactured by Parke, Davis and Company.

HALAZONE (Para-toluolsulphon-dichloramino-benzoic acid, Dakin-Dunham Tablets).—This tablet is used for the sterilization of water for drinking purposes. One-fourth of a milligramme (0.00025 Gm.) of Halazone will sterilize one quart of water in from 15 to 60 minims.

HEDONAL (Methyl-propyl-carbinol Urethane).—It is used as a hypnotic in treatment of insomnia due to mental overwork.
DOSE.—15 to 30 grains (1 to 2 Gm.).

HELMITOL (Hexamethylene-tetramine-anhydro-methylene Citrate).—Colorless crystals, soluble in 15 parts of water, slowly soluble in alcohol. It is used as a urinary antiseptic in doses of 15 grains (1 Gm.).

HEMYPNONE is a combination of diacetylmorphine, Dial, and anesone.
USES.—It forms a non-toxic analgesic and sedative, which finds its main indication for the relief of labor pains. Anesone is a condensation product of acetone and chloroform which decomposes in the intestine, setting free its two components.
DOSE.—One or two tablets as indicated.

HEPARIN is a new anticoagulant to replace Hirudin. Discovered by Dr. William H. Howell. It is used, after being dissolved in normal saline solution, in the proportion of 1 mg. to 5 cc. of shed blood. Supplied in grams or decigrams.
Manufactured by Hynson, Westcott and Dunning.

HEXAL is a new remedy for the treatment of bacterial infections of the genito-urinary system. It consists of equimolecular proportions of hexamethyleneamine and sulphosalicylic acid.

HEXETON is 3-methyl-5-isopropyl-Δ-2.3-cyclohexenon, an isomer of camphor, soluble in water. It is used in the form of injections.

HEXOPHAN-LITHIUM is the lithium salt of oxycarboxyphenylchinolincarbonic acid. It is a yellow crystalline powder soluble 2.5 parts of cold water, more soluble in hot water or alcohol, insoluble in ether. It is especially useful in the treatment of gout.
DOSE.—1 Gm. per day (4 cc. of solution) when injected subcutaneously or intramuscularly; 0.25 to 0.50 Gm. (1 to 2 cc. of solution) when given intravenously.

HEXYLRESORCINOL.—Caprokol—A synthetic chemical, $C_6H_3(OH)_2C_6H_{13}$, said to possess about 45 times the germicidal power of phenol.
An internal urinary antiseptic, indicated in the treatment of infections of the urinary tract. Claimed to be non-toxic in therapeutic doses.
DOSE.—Administered in capsules, in oil solution, in doses of two and one-half grains (0.15 Gm.).
Manufactured by Sharp and Dohme.

HEYDEN 456 is a new iron-arsenic preparation in colloidal solution. It is a clear, brownish-yellow liquid and contains 0.05 per cent iron and 0.025 per cent arsenic as well as 0.4 per cent cresol as a preservative.
DOSE.—One cc. injected at intervals of 4-6 days.

HOMOCAMFIN (known in Europe as "Hexeton") is a brand of Cyclosal or [3-Methyl-5-isopropyl-2-cyclohexenon (insodium salicylate solution)].
Homocamfin is methyl-isopropyl-cyclohexenon in an aqueous solution of sodium salicylate. It is employed in 10 per cent strength intramuscularly and 1 per cent intravenously.
It is supplied in 2.2 cc. ampules (10 per cent solution), boxes of 5, for intramuscular injection, and 1.2 cc. ampules (1 per cent solution), boxes of 5, for intravenous use. 0.2 cc. is added for waste in administration.

USES.—It is a cardio-respiratory stimulant.

DOSE.—Intramuscular administration (amber ampules):
Adults, 1.5 to 2 cc. (¾ to 1 ampule); children (2 to 12 years), 0.5 to 1 cc. (¼ to ½ ampule).
Intravenous administration (white ampules):
Adults, 1 cc. (1 ampule). This method is not free from risk and should be chiefly reserved for emergencies.
Infants, 1-10 of adult doses at beginning, cautiously increased if necessary.
Manufactured by Winthrop Chemical Co.

HORMOTONE is a combination of tonic hormones from thyroid, pituitary gonads and suprarenal.
DOSE.—1 or 2 tablets 3 times daily before meals.
Manufactured by G. W. Carnrick Co.

HYCLORITE is a solution of chlorinated soda, each 100 Gm. of which is said to contain sodium hypochlorite 4.05 Gm., sodium chloride 3.20 Gm., calcium hydroxide 0.17 Gm., inert salts 0.92 Gm. It contains not less than 3.85 per cent of available chlorine.
USES.—Germicide and disinfectant.

HYDROLAN is a fluid ointment base containing wax, petroleum and water (see anhydrolan). Among the anhydrolan preparations upon the market are hyarcoll, containing 10 per cent of colloidal silver; hydrolan cream, a perfumed toilet preparation; hydrolanoform, containing formaldehyde and thickened to a powder with talcum ("Federweiss"); ichthyol hydrolan, containing 10 per cent of ichthyol; iodine hydrolan (3 per cent and also 10 per cent iodine). Mercury hydrolan (⅓ mercury) and salicyl hydrolan containing 10 per cent of salicylic acid.

HYPOTONIN is ethylenediaminoisovalerianate, a white powder melting at 129-130° and easily soluble in water. It is recommended for reducing blood-pressure, especially in arteriosclerosis.

ICHTHALBIN (Ichthyol albuminate).—Ichthalbin is an ichthyol preparation for internal use. It is practically tasteless and odorless. It passes the stomach unchanged but in the intestines the ichthyol is gradually split off to exert its antifermentative action throughout the entire length of the tract.

USES.—Ichthalbin is indicated in chronic intestinal catarrh and putrefactive processes. It is used alone, or as an adjunct to local treatment, in such skin diseases as moist infantile eczema, acne rosacea and congestive dermatoses.

DOSE.—For adults, 15 grains or 3 tablets three times daily. For children, 5 to 10 grains three times daily.

M. Bilhuber Inc., Agents.

I

ICHTHORCIN is an ointment of ichthyol and resorcin as suggested by Dr. Roswell Park. It is used in the treatment of various dermal diseases, including eczema, erysipelas, erythema, herpes, rhus poisoning, psoriasis, pruritis, ani and vulvae, hemorrhoids and other inflammatory and pruritic conditions.

It contains ichthyol, resorcin and mercury combined with a permanently neutral base.

Manufactured by Sharpe and Dohme.

ILETIN is insulin marketed under that special trade name by Eli Lilly and Company.

IMMUNOGEN is the name given to certain new bacterial antigenic substances discovered in the research laboratories of Parke, Davis and Company during a searching biochemical study of antigenic therapy.

While the exact nature of this type of antigen has not been definitely ascertained, the fact that it is derived mainly from the ectoplasm of the bacterial cells has led to its designation by its discoverers as an "ectoantigen," and since it has been shown by many laboratory tests to possess strong antigenic qualities, the name "Immunogen" is applied to it.

There are several immunogens marketed—under such designations as Pertussis Immunogen, Pneumococcus Immunogen, etc.

Manufactured by Parke, Davis and Co.

INCITAMIN is a remedy recently introduced for treatment of slowly healing ulcers and sores. It is described as a preparation of horse-serum treated with trypsin and freed from coagulable substances, containing also ptyalin and phenol (0.5 per cent). A colorless or yellowish liquid, non-poisonous, used by external application on gauze.

INSULIN is an aqueous solution of an active principle from pancreas which affects sugar metabolism. The strength of insulin is expressed in "units," one unit being one-third of the amount required to lower the blood sugar to an average of 0.045 per cent over a period of 5 hours in a normal rabbit weighing 2 Kg. which has been previously starved for 24 hours.

USES.—In the treatment of diabetes.

Manufactured by several concerns.

IODALBIN.—A compound of iodine and blood albumin, containing approximately 21.5 per cent of iodine.
When administered it passes unchanged into the intestines and is dissolved by the alkaline secretion and on absorption exerts a physiological action similar to that of the soluble iodides.
Iodalbin is a reddish-colored powder, practically tasteless and possessing a peculiar, rather pleasant odor, suggestive of cane syrup or molasses. It is almost insoluble in water, acids, alcohol, and other ordinary solvents, but is readily soluble in strong alkaline solutions; more slowly soluble in dilute alkaline solutions.

DOSE.—5 to 10 grains (0.3 to 0.6 Gm.).
Manufactured by Parke, Davis and Company.

IODEIKON (Tetraiodophthalein Sodium).—The sodium salt of a dibasic dye, tetraiodophenolphthalein. It contains not less than 53 per cent iodine. A dark blue, odorless, hygroscopic powder. It is soluble in water and in alcohol.
Tetraiodophthalein sodium is used for the roentgenologic examination of the gall bladder.
It is injected intravenously, 45 grains (3 Gm.) in two doses, a half hour apart, in the morning before breakfast. The solution for injection is made in 24 cc. of distilled water and the solution is sterilized by heat. Tetraiodophthalein sodium is also administered orally in the form of capsules or pills coated with salol.
The average dose by this method is 75 grains (5 Gm.) administered in 5 capsules or pills of 15 grains (1 Gm.) each, during the evening meal.
Manufactured by the Mallinckrodt Chemical Works.

IODIPIN 10 per cent (Iodized Sesame Oil 10 per cent).—An iodine addition product of sesame oil containing from 9.8 per cent to 11.2 per cent of iodine in organic combination. It should be exposed to the light to prevent its darkening.
Iodipin 10 per cent is a yellow, oily liquid, having a purely oleaginous taste. It is insoluble in water.

DOSE.—From 1 to 2 drachms (4 to 8 Gms.).
Iodipin 40 per cent is available.
Marketed by Merck and Company.

IODIVAL is Iodoisovalerylcarbamide.—Iodival contains 47 per cent iodine in organic combination. It passes the stomach unchanged, dissolves in the intestines and is absorbed and carried to the fat and nervous tissues where the iodine is liberated.

USES.—Used in organic diseases of the central nervous system, arteriosclerosis, scrofula, asthma, and tertiary syphilis.

DOSE.—5 grains (or 1 tablet) several times daily.

IODO-CASEIN—CASEIN IODINE.—A compound of iodine with milk casein, containing about 18 per cent of iodine in organic combination.

This drug undergoes practically no change in the stomach, but is said to be digestive in the intestines and absorbed. Its advantage is its less rapid absorption and lack of saline taste.
Iodo-casein is a yellowish-brown powder, almost odorless and tasteless, insoluble in water, or acid solutions. It is partially dissolved and decomposed by alkalies.
DOSE—5 to 20 grains (0.3 to 1.3 Gm.).
Manufactured by H. K. Mulford Company.

IODOPHENACETIN (IODOPHENINE) is prepared by adding some moderately diluted hydrochloric acid and a solution of potassium iodide and iodine in water to a solution of phenacetin in glacial acetic acid, when, upon cooling, steel-blue crystals are deposited. Contains about 50 per cent of iodine.
Used externally.

IODASEPTINE is a French preparation occasionally used by American physicians and stated to be iodobenzomethyl monoformine. It is used as an intravenous antiseptic in chronic conditions.
Marketed in ampules and tablets.

IODOSTARINE (Diiodotariric acid — $C_{18}H_{32}I_2O_2$). — An iodine addition product of tariric acid, $C_{18}H_{32}O_2$, derived from the fruit of a species of *Picramnia*. It contains 47.5 per cent of iodine.
It is insoluble in water; slightly soluble in cold alcohol; soluble in warm alcohol, ether, chloroform, benzene, and carbon disulphide. It is permanent in the air.
It is marketed in the form of tablets each containing 10 milligrams of iodine equivalent.
DOSE.—For prevention of Goiter—In children: 1 tablet once a week. For girls between the ages of 11 and 16 years; 2 or 3 tablets weekly. For treatment of Goiter—2 or 3 tablets weekly according to case.

I-O-SIL is stated to be a non-irritating, non-toxic, stainless germicide, containing 20 per cent of silver iodide in a colorless solution.
DIRECTIONS.—I-o-sil is used in dilutions of one-half per cent to twelve per cent, according to conditions or experience.
Manufactured by The Maltbie Chemical Company.

IOTHESIN is a proprietary throat lozenge with antiseptic, astringent and anesthetic properties.
They contain ioform (organic iodine) methenamine, anesthesin and a demulcent base.
Manufactured by The Drug Products Co., N. Y. C.

IOTHION.—Iothion contains from 77 to 80 per cent of iodine. It is used for systematic effect of iodides by external application. Iothion is absorbed from the intact skin. It is claimed to be practically nonirritating to the skin in the concentrations ordinarily used, and to produce no discoloration.

It is used in the form of *Iothion Oil* (10 per cent), also in solution in alcohol or glycerin, or in the form of ointments containing from 5 to 20 per cent of iothion.
Distributed by the Winthrop Chemical Company.

IPRAL is the calcium salt of ethylisopropylbarbituric acid, $Ca(C_3H_5.C_3H_7.C.CO.NH.CO.N.CO)_2 + 3H_2O$. It occurs as a white to faintly yellowish crystalline powder, which is soluble in about 30 parts of water at 25° C., and insoluble in alcohol.

DOSAGE.—As a sedative, or for ordinary insomnia, one or two Ipral tablets (2 to 4 grains) are usually sufficient; as a hypnotic, two tablets (4 grains) are usually effective, with a cup of hot water, tea or milk.
Ipral is marketed only as 2 grain tablets in vials of 10, and bottles of 100 tablets.
Manufactured by E. R. Squibb and Co.

ISACEN is a new scientific laxative. Chemically it is diacetyl-dioxyphenyl-isatin. It is unique in that it is not absorbed and cannot possibly injure the kidneys, liver or stomach. This fact has been proven both by an extremely delicate chemical analysis and by actual clinical experiences.
Isacen is marketed in tablets of 1/13 grain, in vials of 40. They are tasteless and small in size.

DOSE.—One or two as indicated.
Manufactured by the Hoffman-LaRoche Chemical Works.

IVYOL is a preparation of the active principle of the poison ivy, or poison oak (*Rhus toxicodendron*).
The exact chemical nature of the irritant principle which causes ivy poisoning (dermatitis venenata) is not definitely known.
It has been established, however, that poisoning takes place only a result of contact with cell-sap of the plants. The poison is contained in the leaves, flowers, and green fruit, but not in the ripe fruits. In man, complete immunity to the toxic substance does not exist. Individual susceptibility varies greatly, some persons being extremely sensitive, others relatively resistant.

USES.—Ivyol is used in controlling the symptoms of ivy poisoning.
It is given by injection.
Manufactured by H. K. Mulford Company, Phila.

IZAL.—An albuminous emulsion containing not less than 50 per cent of a liquid, "izal oil," which is obtained in the destructive distillation of bituminous coal, and which consists essentially of monatomic phenols boiling between 205° and 300° C. Izal is, therefore, practically free from phenol and cresols.

ACTIONS AND USES.—Izal is a germicide and disinfectant.
It is claimed to have a phenol coefficient of 12, but it is stated to be less toxic than phenol.

DOSE.—For general use and as a gargle, douche, etc., dilutions of 1:300 (1 fluidrachm to 1 quart of water) are used. For the disinfection of urine,

feces, etc., dilutions of 1:100 (1 fluidrachm to 1 pint of water) are advised. Izal is not intended for internal use.
Manufactured by the Abbott Laboratories, Chicago.

IZAL DISINFECTANT POWDER.—Izal oil, 10 per cent; naphthalene, 5 per cent; inert, absorbent earth, 85 per cent.

K

KINAZON is reported to be a leuco base of certain rosaniline dyes combined in part with iodine and in part with bromine. It is recommended for use as an antiseptic spray in broncho-pneumonia and grippe.

KINAZYME contains 1/60 gr. whole pituitary in addition to pancreas, liver and spleen substance with calcium phosphate.
USES.—An aid to metabolism in tuberculosis and other wasting diseases; especially valuable in undernourished and backward children.
Manufactured by G. W. Carnrick Co.

KLIMAKTON is supplied in sugar-coated bean-shaped pills each containing 0.45 grains pure ovarian substance, 0.09 grains pure thyroid substance, 2½ grains bromural, and 2½ grains calcium-diuretin. Therefore with the pure glandular products is combined an approved sedative and a well-tolerated cardio-renal tonic.

DOSE.—3 times daily 2 pills after meals.
Manufactured by E. Bilhuber, Inc.

KRELOS.—Liquor Creosolis et Phenolis Compositus—A solution of cresols or higher phenol homologues and rosin soap. It is said to represent 60 to 67 per cent of phenols.
A dark brown, almost black, liquid, having a specific gravity of about 1.040 and a characteristic creosolike odor. With water it forms an almost white, milk-like emulsion.
The phenol coefficient ranges from 5 to 7, as stated on the label.

ACTIONS AND USES.—An antiseptic and germicide.
Manufactured by H. K. Mulford Company.

KRESIVAL.—Kresival is a syrupy preparation containing calcium-cresol-sulphonate.
Kresival occurs in the form of a palatable, syrupy fluid, containing 6 per cent of the calcium salts of cresolsulphonic acids. It is an expectorant and anticatarrhal and is suggested in the treatment of bronchitis, and influenza and in convalescence from pneumonia, pertussis, etc.

DOSE.—The dose of kresival for adults is one dessertspoonful to one tablespoonful, three or four times daily; for children, one teaspoonful. It is best mixed with equal parts of water.
Manufactured by The Winthrop Chemical Company, Inc.

KRES-LUMIN.—Kres-lumin is an expectorant and cough sedative.
It is kresival with the addition of luminal. It is an agreeable fluid preparation containing 1/16 grain of luminal to the teaspoonful.

DOSE.—For adults, two to three teaspoonfuls, three or four times daily. For children, according to age, one-half to one teaspoonful. Kres-lumin is best mixed with an equal amount of water.
Manufactured by The Winthrop Chemical Works, Inc.

L

LACTARGAN is a silver lactate preparation. It is used in the treatment of gonorrhoea in the form of a 1 to 20 per cent solution or in suppositories.

LACTOPHENIN (Lactylparaphenetidin) $C_6H_4.OC_2H_5.N.H.CO.CH(OH).CH_3$.—Prepared the same as acetphenetidin except that a lactic acid radical replaces the acetic acid radicle. Uses similar to acetphenetidin and in the same dose.

LENICET PREPARATIONS are a line of pharmaceuticals containing lenicet, a patent form of aluminum acetate having the formula $Al(OH)(CH_3COO)_2$. Among the preparations are *formalin-lenicet paste, lenicet bandages for burns, lenicet tooth paste* (or lenidont tooth paste) and *lenicet tooth powder* (or lenidont tooth powder).

LENIGALLOL is Pyrogallic triacetate and has the effectiveness of pyrogallic acid without its irritant properties. A white powder to be used in 5 to 25 per cent ointments (zinc paste) in acute eczema and psoriasis.
Manufactured by E. Bilhuber, Inc.

LETHEOL is a preparation sold as chocolate-coated tablets, each containing 0.2 Gm. of diacetyl barbituric acid, 0.01 Gm. of diethylmorphine, 0.2 Gm. of acetphenetidine, 0.3 Gm. of codeine phosphate, 0.003 Gm. of diacetylmorphine, 0.0003 Gm. lecithin and 0.003 Gm. of strychnine nitrate.

LEUSID, a gray powder, consists of glucose in which mercury is finely suspended. With water a dark gray liquid is produced in which the mercury is so finely divided that it can be used intravenously.

LIPOIODINE.—Ethyl diiodobrassidate, $C_{21}H_{39}I_2COO(C_2H_5)$, the ethyl ester of diiodobrassidic acid, $CH_3.(CH_2)_7.CI:CI.(CH_2)_{11}.COOH$, containing 41 per cent of iodine. Lipoiodine crystallizes in white, odorless, and tasteless needles, melting at 37° C. It is insoluble in water, slightly soluble in alcohol and very soluble in fatty oils, ether and benzene. It is decomposed by exposure to direct light.
DOSE.—From 5 to 15 grains (0.3 to 0.9 Gm.)

LIQUOR ERGOT-MULFORD (Cornutol) is a biologically tested liquid extract of ergot, containing the water-soluble constituents of ergot and about 10 per cent of alcohol.

It is a brownish-red liquid, having a characteristic, not unpleasant, odor and disagreeable taste.

USES.—The same as those of ergot.

DOSE.—Hypodermically, from 10 to 30 minims (0.6 to 2 cc.); by the mouth, from 10 to 60 minims (0.6 to 4 cc.) repeated as often as may be necessary. On account of the deterioration liable to occur in this preparation, the date when it was tested appears on each package. The air has been removed from the vacules before sealing to prevent deterioration.
Manufactured by H. K. Mulford Company.

LORETIN (Meta-iodo-ortho-oxychinolina-sulphonic acid), $C_9H_4IOH\text{-}SO_3H\text{-}N$, is a yellow, odorless powder, almost insoluble in water; and insoluble in ether and oils. It is used as a dusting powder to replace iodoform and in 5 to 10 per cent ointments.

LUMALGIN.—Lumalgin is an analgesic hypnotic.
It is a combination of luminal (¼ grain) with acetylsalicylic acid (5 grains) in tablet form. These amounts are based upon the established average dose of each drug for the conditions in which their use is indicated.

DOSE.—For adults, one to three tablets, according to the degree of pain, nervousness and insomnia. The frequency of administration will depend upon the severity of the condition in the individual case.
Manufactured by the Winthrop Chemical Co., Inc.

LUNOSOL is a preparation of colloidal silver chloride containing silver chloride, 10 per cent, and sucrose 90 per cent.

USES.—It has antiseptic and germicidal properties, causing neither irritation of the mucous membranes, nor coagulation of albumin. It does not stain the skin.

DOSE.—Lunosol is generally used in solutions (colloidal suspensions) of from 1 to 25 per cent.
Lunosol is a white, slightly hygroscopic, granular powder, odorless, having a sweetish, metallic taste. It is completely soluble in one half of its weight of water, forming an opalescent solution (colloidal suspension) which is bluish white in reflected light and reddish in transmitted light.
Manufactured by Hille Laboratories, Inc.

LYTOPHAN is phenlyquinolindicarboxylic acid and is represented by the formula $C_9H_5(C_6H_5COOH)N.COOH$. It is recommended as a remedy for gout, subacute rheumatism, neuralgia and migraine.

M

MAGNESIUM SUPEROXOL is a white, odorless, tasteless powder, containing 25 per cent of Magnesium Peroxide. It is insoluble in water, but readily dissolves in dilute acids with the production of hydrogen peroxide.

USES.—Magnesium superoxol is useful in disorders of the stomach and intestines, particularly where there is faulty metabolism or fermentation.

DOSE.—10-15 grains 4 times daily.
(Peroxoids are 5 grain tablets of the above compound.)
Manufactured by Merck Co.

MAMMAGEN, each tablet contains 1/8 grain desiccated entire pituitary substance with the hormones and vitamines of corpus luteum, placenta and mammary glands.

USES.—To increase lactation in deficient milk supply in the nursing mother.

DOSE.—1 or 2 tablets or capsules 3 times daily after meals.
Manufactured by G. W. Carnrick Co.

MANNITOL-QUININE.—For this new mode of quinine administration is as follows:

Quinine (Alkaloid)	12.0 Gm.
Boric Acid	8.4 Gm.
Mannitol	7.4 Gm.
Distilled Water ..... To make	100 cc.

One cc. of this solution contains 0.12 Gm. (approximately 2 grains) of quinine base and 0.084 Gm. (1½ grain) of boric acid. The injection thus contains doses of quinine within clinical limits in a reasonably small volume of diluent. The solution is easily made by rubbing the powders together in a mortar with about half the required amount of water, and adding, as the alkaloid dissolves, sufficient to produce the necessary volume. It can be sterilized by heat, for, while a deposit of the alkaloid base separates out on heating, this redissolves on cooling. Mannitol-quinine is stable at ordinary temperatures, and is practically neutral (pH = 7). The formula given above is suitable for hypodermic injection. For intravenous use a dilute solution, 1:10 or 1:20) is used. When diluted, some of the quinine separates out, but on addition of more water this dissolves again, forming a clear solution.

MARGOSIC ACID, COMPOUNDS OF.—Margosic acid is the fatty acid obtained from oil of neem (*Melia Azadirachta*). The salts used medicinally are the margosates of potassium, calcium, sodium, lithium, bismuth, iron, lead, copper, arsenic, mercury, sulphur, antimony, quinine, and cinchonine. The most toxic of the margosates are those of copper, antimony, and quinine; the most powerfully bactericidal is copper margosate, while copper and mercury margosates are strongly antiprotozoal. The ethyl ester of margosic acid is inimical to the coccal and coli group, but not to the cholera bacillus. As an antiprotozoal agent it is less active than the ethyl ester of mustard oil but more so than that of castor oil. Copper margosate has been found to be a useful non-toxic remedy for the treatment of gonorrhoea.

MATURIN is a solution of phloridizine and betaeucaine hydrochloride. It is used in the diagnosis of pregnancy.

MELUBRIN is the sodium salt of 1-phenyl-2,3-dimethyl-5-pyrazolon-4-amino-methansulphonic acid.

USES.—A powerful antipyretic in fever and it is analgesic. It is claimed that melubrin in ordinary or even large doses is not toxic.

It is a white, odorless, almost tasteless crystalline powder, readily soluble in water, but slightly soluble in alcohol. The aqueous solution is neutral in reaction but unstable.

DOSE.—From 1 to 2 Gm. (15 to 30 grains). The larger doses are recommended for the treatment of rheumatism. It is claimed that as much as 10 Gm. (150 grains) may be given daily.

MERCAFFIN is a mercurous compound of trimethyl-dioxy-pirin. It is recommended as an antiseptic against spirochetae in veterinary practice.

MERCEDAN is the mercury-sodium salt of paranucleinic acid. It is marketed in solution and in tablets. The former is employed intramuscularly and has been found by Jacoby of value in syphilis.

MERCURETTES is a contraction of mercury briquettes—are oblong cakes of cacao-butter, 90 grains in weight, containing 50 grains of metallic mercury minutely subdivided and evenly distributed throughout the mass.

DOSE.—50 grains of metallic mercury is contained in each cake. If a dose of 25 grains is desired, all that is necessary to do is to divide the cake into equal parts; and any other fraction of 50 grains can be obtained by the same method. They are intended to replace blue ointment for inunction. Manufactured by Parke, Davis and Company.

MERCURIALIZED SERUM is a solution of mercuric chloride in normal horse serum diluted with physiologic solution of sodium chloride. It is prepared by the method of C. M. Byrnes.

USES.—Mercurialized serum is proposed for the treatment of syphilis, particularly for the cerebrospinal type. This is an attempt to produce a preparation which, while therapeutically active, is noncorrosive, has a low toxicity and slight local irritative action, does not coagulate serum albumin, and which consequently is adapted to intraspinal use and can be used intravenously without danger of phlebitis.

DOSE.—Intraspinally, 30 cc. of a solution, the dose containing the equivalent of 1/50 grain (0.0013 Gm.) of mercuric chloride, after *first* withdrawing sufficient spinal fluid to reduce the pressure to 30 mm. (water). The dose may be increased, when tolerance is established, to 30 cc. of a stronger solution, the dose containing the equivalent of 1/25 grain (0.0026 Gm.) of mercuric chloride. Intravenously, 2 cc. of solution, the dose containing the equivalent of 1/12 grain (0.0055 Gm.) of mercuric chloride.

MERCURIC BENZOATE.—($Hg(C_6H_5COO)_2 + H_2O$).—The mercuric salt of benzoic acid.

A white, crystalline powder; slightly soluble in water, yielding a weakly acid solution; more soluble in aqueous sodium chloride solution. It is insoluble

in alcohol or ether. At 20° C., a 10 per cent solution of sodium benzoate dissolves 1 per cent of its weight of mercuric benzoate. With alcohol mercuric benzoate is decomposed into a yellow basic salt.

USES.—The same as mercuric chloride.

DOSE.—Intramuscularly it is given in ¼ grain doses, on alternate days. Solution is effected in 2 per cent salt or 5 per cent ammonium benzoate aqueous solutions.

MERCURIC CYANIDE ($Hg(CN)_2$).—The mercuric salt of hydrocyanic acid.

In colorless or white, prismatic crystals, or white powder, odorless and having a bitter metallic taste. The salt is excedingly poisonous It darkens on exposure to light. It is soluble at 15° C. in 12.8 parts of water and in 15 parts of alcohol, in 3 parts of boiling water and in 6 parts of boiling alcohol, and is very sparingly soluble in ether.

USES.—Mercuric cyanide has been reported to be as actively antiseptic as mercuric chloride and to be less irritating; but this has been questioned. It is used locally and internally like mercuric chloride.

DOSE.—Internally, from 1/16 to ⅛ grain (0.004 to 0.008 Gm.); locally in 1:4000 to 1:2000 solution.

MERCURIC OXYCYANIDE ($Hg(CN)_2HgO$).—A basic mercuric salt of hydrocyanic acid, containing 51.7 to 56.0 per cent of mercuric cyanide [$Hg(CN)_2$].

A white, or nearly white, microcrystalline powder, soluble in about 80 parts of water, yielding a solution alkaline to litmus.

USES.—Mercuric oxycanide has been proposed as a substitute for mercuric chloride. Its antiseptic power is claimed to be greater and it is asserted to be less irritating than mercuric chloride because it does not act on albumin to the same extent. It has the advantage over mercuric chloride in that it does not corrode steel instruments.

DOSE.—Mercuric oxycyanide may be administered in the same doses as mercuric chloride. It may be applied locally in solutions of 1:5000 or somewhat stronger.

Prepared by the Gradwohl Laboratories.

MERCURIC SUCCINIMIDE ($Hg[(CH_2.CO)_2N]_2$).—A white, crystalline powder; soluble in about 10 parts of cold water; soluble in about 5 parts of boiling water, and in 300 parts of alcohol. It is very stable in solution. It should be protected from light.

USES.—Mercuric succinimide has the action of other compounds of mercury, but lacking their irritating properties. It is used like other compounds of mercury in the treatment of syphilis.

DOSE.—Mercuric succinimide is used mainly by hypodermic injection. The daily hypodermic dose is from 1/6 to ⅓ grain (0.01 to 0.02 Gm.) given in the form of a 2.5 per cent solution (from 8 to 16 minims [0.5 to 1 cc.] of such solution). It may be given by the mouth in doses of from 1/6 to ¼ grain (0.01 to 0.15 Gm.).

MERCUROCHROME-220 SOLUBLE is the disodium salt of dibrom-oxymercuri-fluorescein and is readily soluble in water, forming a deep cherry-red solution. The compound contains 24-26 per cent of mercury on a dry basis, in organic combination. It has intense and, consequently, effective penetrating abilities and, as used, is practically non-irritating and non-toxic. By bacteriological tests, in vitro and clinically, its germicidal powers, when compared with relatively effective and permissible concentrations of the popular germicides show much greater rapidity and, through its greater penetrating ability, more effective therapeutic properties. Supplied in 10 Gm. bottles of the salt or in bottles of thirty 4.6 grain tablets. Also special intravenous scales in 10 Gm. bottles or in boxes of six sealed tubes 0.5 Gm. each.

USES.—Infectious diseases subject to local treatment; infections of the genito-urinary tract, especially diseases of gonococcal origin; eye, ear, nose and throat infections; as a germicide in stomatological practice and as a pre-operative antiseptic. It is also used as a general antiseptic in place of tincture of iodine. Intravenously, it is employed for treating septicemias and certain local infections.

Method of Application.—Mercurochrome is used almost exclusively in aqueous solution of strengths varying from one-half per cent to two and one-half per cent, or stronger, applied directly to the parts affected. It may, however, be used in forms of starch paste or lanolin ointment, when such applications are required.

Manufactured by Hynson, Westcott and Dunning.

MERCUROL (Mercury Nucleinate) is an organic compound of mercury with nucleinic acid from yeast, containing 20 per cent of metallic mercury. A brownish-white powder, soluble in water, especially in warm water, insoluble in alcohol. Its watery solution has a distinct metallic taste, a weak alkaline reaction, and is not precipitated by alkalies, nor by albuminous liquids.

USES.—Mercurol does not coagulate albumin; it has marked bactericidal power and possesses the pharmacological action of soluble mercury compounds.

It is said to be useful as a local antiseptic application and as an antisyphilitic remedy.

DOSE.—From ½ to 2 grains (0.03 to 0.12 Gm.)

Manufactured by Parke, Davis, and Company.

MERCUROPHEN.—Chemically it is a sodium-oxymercury-ortho-nitro-phenolate, containing about 50 per cent mercury. It appears in the form of an odorless, brick-red powder, which is freely soluble in water. The powder is capable of being molded into tablets which are likewise soluble. The solutions are odorless and deep amber-yellow in color, with but slight staining effect. The 1:1000 solutions have a slightly metallic taste, but the higher dilutions are practically tasteless.

USES.—As a general antiseptic and germicide in aqueous solutions ranging from 1-10000 to 1-1000 strength.
Manufactured by H. K. Mulford Company.

MERCUROSAL.—Chemically this compound is disodiumhydroxymercurisalicyloxyacetate—$(HOHg).NaOOC.C_6H_3.OCH_2COONa$.—It contains from 43.0 to 43.8 per cent of mercury in organic combination.
A white, amorphous powder, soluble in about 10 parts of water, insoluble in the usual organic solvents. Dilute aqueous solutions of mercurosal are quite stable when protected from air, but on prolonged standing show an insoluble precipitate. Mercurosal is decomposed by acids, strong reducing agents; salts of heavy metals, such as silver or lead, yield insoluble precipitates. From a 1 to 2 per cent aqueous solution of mercurosal, calcium chloride precipitates a calcium salt which dissolves on subsequent dilution with water.
USES.—It is claimed that mercurosal is relatively free from irritant action, that it is eliminated without untoward effect on the kidney and that its toxicity is relatively lower than mercuric chloride and mercuric salicylate. It is intended for the mercurial treatment of syphilis. It is administered either intramuscularly or intravenously.
DOSE.—The usual intramuscular dose is 0.05 Gm. dissolved in 2 cc. of sterile water, every fourth or fifth day for ten or twelve doses. The usual intravenous dose is 0.1 Gm. dissolved in 5 cc. of sterile water administered every second or third day for ten to twelve doses.
Manufactured by Parke, Davis and Company.

MERCUROUS MORRHUATE can be prepared by addition of a freshly made solution of mercurous nitrate to a 3 per cent solution of sodium morrhuate to complete precipitation, washing and drying the precipitate in a current of warm air. This morrhuate is grayish in color, homogeneous, gelatinous, and sticky in nature. For intramuscular injection 3 grains (equal to 1½ grains Hg) may be given.

MERGAL is a mixture of 1 part of mercuric cholate and 2 parts of albumin tannate put up in capsules. Each capsule is said to contain approximately 2¼ grains (0.15 Gm.) of mergal, equivalent to ¾ grain (0.05 Gm.) of mercuric cholate and 1½ grains (0.1 Gm.) of albumin tannate. Mergal contains approximately 4.4 per cent of mercury.
It is a yellowish-white, loose, somewhat light powder, insoluble in water and alcohol and almost insoluble in solution of sodium chloride.
USES.—Mergal is said to pass through the stomach without decomposition and to be decomposed into its constituents in the small intestine, where the mercury is quickly absorbed into the blood and excreted through the kidneys. It is said to be useful in all forms of syphilis and in the so-called parasyphilitic affections, such as tables and general paralysis.
DOSE.—One capsule three times a day after meals, gradually increasing to two capsules five or six times a day.
Manufactured by Riedel and Company.

MEROXYL is a mixture containing approximately 50 per cent of the sodium salt of 2,4-dihydroxy-3,5-dihydroxymercuribenzophenone-2-sulphonic acid, with foreign matter consisting of ammonium 2,4-dihydroxybenzophenone-2-sulphonate, sodium acetate and water.
A flesh colored or pink powder easily soluble in hot water up to 10 per cent. Solutions of 2.5 per cent or stronger gel or form a deposit on cooling. The color of the solution varies with concentration; a 0.5 per cent solution has a brownish-pink color with greenish fluorescence, the color becoming browner in more concentrated solutions. The solution produces no stain on skin or fabrics.

USES.—A local antiseptic and germicide recommended for superficial infections. It is used for wet dressings of wounds, and also for irrigation of wounds and of infected bladders.

DOSE.—For wet dressing of wounds and irrigation of infected wounds, a 0.1 per cent solution is used. For prophylactic treatment of urinary infection, postoperative cystitis, acute gonorrhea, abscess and carbuncle, a 0.5 per cent solution is employed. Solutions of 2.5 per cent or greater strength gelatinize on standing.
Manufactured by Hynson, Westcott and Dunning.

MEROXYL TABLETS are a potent organic mercurial germicide for local application. Supplied in bottles of thirty or one hundred 2.3 grain tablets.
Manufactured by Hynson, Westcott and Dunning.

MESOTAN (Salmester) $C_6H_4.OH.CO.O.(CH_2.O.CH_3)$ —Methyl-oxymethyl salicylate, an ester of salicylic acid, analogous to methyl salicylate.
It is a clear, yellowish, faintly aromatic, oily fluid; specific gravity 1.2 at 15° C. and boiling at about 162° C. It is but slightly soluble in water, but readily soluble in the usual organic solvents and miscible with oils in all proportions.
It should be kept in a cool place and preserved dry in well-stoppered bottles.
ACTIONS AND USES.—Mesotan is an active counterirritant, used especially in rheumatic conditions, similarly to the local application of methyl salicylate. It is more irritant than the latter, and lacks its odor. It is absorbed from the skin, but its action is predominantly local, relieving pain and swelling. It is not an efficient means for producing the systematic actions of salicylates.

DOSE.—For application mesotan is diluted with from 1 to 4 parts of olive oil or cottonseed oil, and painted over the affected area, usually twice daily. Friction should not be used, and dressings, if any are necessary, should be light and permeable. The site of application should be changed, if possible, after each treatment; or the area may be rested for two days after four days of treatment.
Distributed by The Winthrop Chemical Company, Manufactured by The Bayer Company.

MESUROL (a brand of benzobis) is a basic bismuth salt of dioxybenzoic acid monomethylether in 20 per cent emulsion.

The bismuth salt which is the active constituent of mesurol is a yellowish gray powder, insoluble in water and in most organic solvents. It contains not less than 54 per cent bismuth. Mesurol is a 20 per cent oily emulsion of this salt, each cc. containing 0.11 Gm. (1.75 grains) bismuth.

INDICATIONS AND USES.—Used in the treatment of all forms of syphilis. Mesurol is used by deep intramuscular injection, especially into the glutei.

DOSE.—In adults the initial dose is 0.5 cc. (equivalent to about 1 grain bismuth). This is increased to 1 cc. at the second injection; administration is continued in this dose until a total of 8 to 12 injections (14 to 20 grains bismuth) has been given. For children the dose is proportionately less according to age; for infants, 0.05 to 0.1 cc. intragluteally every third day.
Manufactured by the Winthrop Chemical Company, Inc.

METAGEN is a preparation of concentrated vitamines in a convenient form for therapeutic administration. Both the water soluble and fat soluble vitamines are present.

USES.—It is recommended as an adjuvant in ill-defined disorders of nutrition, in convalescence from infectious and other debilitating diseases, and in the nutritional treatment of wasting diseases, anemia and other dyscrasias.

DOSE.—5 grains several times daily.
Manufactured by Parke, Davis and Company.

METAPHEN is 4-nitro-3:5-bi-acetoxymercuri-2-cresol. It is a heavy brownish-yellow powder, containing 59.98 per cent of mercury, insoluble in water, but completely soluble in dilute aqueous sodium hydroxide, the color of its solution being red or amber. In concentrations sufficient to exert germicidal effect these solutions do not stain either human tissue or linen; they are practically non-irritating and can be applied to the eye, to mucous membranes or to skin surfaces without deleterious effect. In ordinary concentrations (up to 1:200) metaphen does not precipitate proteins; for practical purposes the strength of a solution should not exceed 1:1000. Metaphen is supplied in solution 1:500, a strength that admits of easy dilution to any required strength.
The antiseptic and bactericidal properties of metaphen have been found to be very powerful. As it does not precipitate proteins, its penetrative power is very marked. The solution is stable, it does not stain, it is non-toxic and non-irritating, and it does not tarnish metal—all the qualities of an ideal antiseptic. One of the uses to which it is especially adapted is as a nasal douche for rhinitis, sinusitis, and various forms of nasal catarrh. For this purpose a 1:5000 solution sniffed up the nostrils brings almost instant relief, and often will abort a severe cold. This solution is made by dilution of 1 part of the stock solution with 10 of water. Metaphen is also recommended in various eye affections, for the sterilization of instruments, and as an antiseptic application in many forms of infection.
Manufactured by The Abbott Laboratories.

METAPHEN SOAP represents pure liquid soap containing metaphen in proportion of 1 to 1000, i.e., 1 Gm. of metaphen powder to 1000 Gm. of soap.
Metaphen soap is readily soluble in water of any temperature so that it can be easily washed away.
Thus it can be of much service in clinical practice when a mild soap with very high bactericidal qualities is needed.
Manufactured by The Abbott Laboratories.

METATONE is a palatable nutrient tonic, hematinic, and stimulant of appetite andd igestion. It contains vitamin B extract with nucleic acid and various glycerophosphates.
DOSE.—The dose for metatone for an adult is one to four teaspoonfuls, according to the nature of the case. It may be taken in a little water 3 or 4 times a day, usually after meals. For children, one half to one teaspoonful is the customary dose, diluted with water.
Manufactured by Parke, Davis and Company.

METHACETIN (Para-methoxyacetanilid) is prepared like phenacetin except that methyl iodide or chloride is substituted for the respective ethyl compound. Lustrous, scaly crystals, colorless, odorless. Antipyretic and analgesic in much smaller doses than phenacetin.

METHYLAL (Methylene-dimethyl Ether) is prepared by distilling a mixture of methyl alcohol, sulphuric acid and manganese dioxide. A colorless liquid, easily soluble in water, in alcohol, in fatty and in ethereal oils. It is used as a hypnotic.
DOSE.—75 to 100 grains (5.0 to 6.5 Gm.)

METHYL-ASPRIODINE.—Elsewhere is given a description of *Aspriodine*, a compound of acetyl-salicylic acid and iodine, which, when administered internally, splits up into "aspirin" and iodine. Quite recently a methyl compound of this substance has been put on the market under the name of Methyl-aspriodine. This is methyl-acetyl-iodo-salicylate; it contains 39.7 per cent of iodine and the equivalent of 56.3 per cent of aspirin. It is a distinct novelty, and may be regarded as an improvement on oil of wintergreen, or methyl salicylate. It has the most interesting characteristic of being a white powder at ordinary temperatures, but it melts to a clear liquid at 40°C. (104°F.), that is, practically at body temperature. It can, therefore, be rubbed as a powder into the skin, and is completely absorbed. Methyl-aspriodine differs from methyl-salicylate in being non-greasy and virtually odorless. It is miscible with olive or almond oil in all proportions, but it is not miscible with liquid paraffin.
For application in rheumatic affections a quantity of from 5 to 20 grains—as much as will lie on a dime (5 grains) or on a quarter (20 grains)—is rubbed lightly into the affected parts. It should not be applied to mucous membranes. At first a slight warming or tingling sensation is produced, and in some cases a mild local anesthesia. It may also be mixed with an equal

quantity of lanolin, or as a liniment on the lines of that of methyl salicylate-menthol, camphor, eucalyptus, etc. Though not designed for internal use, it has been shown to be harmless in doses of 5 to 10 grains.

MIGRAININ.—Antipyrine-caffeine citrate is prepared by fusing on a water bath a mixture of 85 parts of antipyrine, 9 parts of caffeine and 6 parts of citric acid. A colorless ,hygroscopic powder used in the treatment of headache in doses of from 5 to 15 grains (0.3 to 1 Gm.).

MILANOL is bismuth basic trichlorbutylmalonate and is represented by the formula $Bi(OOC.CH_2.COO.C.CH_3CH_3CCl_3)_2$. It is used in the form of a 5 to 10 per cent ointment in the treatment of chronic eczema and other dermatoses.

MODILAC is a convenient and accurate method of modifying cow's milk for infant feeding. A modifying unit in tablet form for insertion directly into the nursing bottle. It consists of milk sugar with the inorganic salts naturally existing in milk serum.
Manufactured by Wm. S. Merrell Co.

MONARSONE is a new antisyphilitic, is disodium monoethylarsone, $CH_3CH_2AsO(NaO)_2$; it contains 7 per cent more arsenic than arsenobenzol, is decidedly less toxic than the arsenobenzol compounds, is perfectly soluble in small quantities of water, and may be given without danger in solution containing 0.2 Gm. per cc. Monarsone has no hemolytic action on the red corpuscles, and may be given intravenously without fear of extravasation, as leakage causes no untoward effect. It requires no special apparatus for its administration and its solutions are so stable that they resist oxidation or decomposition when boiled or subjected to the higher temperatures of the autoclave.

MOOGRAL is a mixture of esters of acids of the chaulmoogric series, for use in the treatment of leprosy. A limpid, almost colorless oil, given by injection in doses of 1 cc. gradually increased. A product of a similar nature is known as Chaulmestrol.

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NADISAN-KALLE is the potassium salt of bismuthyltartaric acid saturated with highly dispersed colloidal bismuth hydroxide. This compound has marked spirocheticidal properties *in vivo*.

NAFTALAN is an ointment-like body prepared by distilling a peculiar naphtha from the Caucasus district of Asia Minor, mixed with an anhydrous soap. It is used with good results in cases of burns and in various skin diseases.

NEOBORNYVAL is stated to be the isovalerylglycolic acid ester of borneol. One to two pearls in water or some other fluid are given 3 times daily in the treatment of neurasthenia and hysteria.

NEO-CHINAMYL is trichloraldehydequininisovalerianic acid ethyl ester. It is recommended for use in neuroses of the heart and in insomnia due to nervousness.

NEONAL, of n-butyl ethyl barbituric acid, is a new hypnotic and sedative. Neonal is a member of the barbituric acid series, and therefore closely related to barbital.

USES.—It resembles the other hypnotics of that series in its freedom from side and after effects. It is two to three times as effective as barbital, and its certain and desirable sedative action makes its use particularly satisfactory.

DOSE.—The dose of Neonal varies from ¼ to 6 grains (½ to 4 tablets), depending upon the severity of the conditions.

Manufactured by The Abbott Laboratories.

NEONAL COMPOUND is a combination of neonal and amidopyrine, the latter being both analgesic and antipyretic. Its use, therefore, recommends it (1) as an analgesic and sedative during the day, and (2) to secure sleep, with freedom from pain, at night.

DOSE.—The dosage of neonal compound varies from one to four tablets, according to the severity of the case.

Manufactured by The Abbott Laboratories.

NEO-RIODINE is an organic iodine preparation for injection. It is stated to contain an iodinized glyceryl ester of ricinoleic acid and sodium iodide. It is marketed in ampules containing a 10 per cent solutio nof the iodine compounds.

NEOROBIN is a derivative of chrysarobin, obtained by dissolving the latter in glacial acetic acid followed by reduction with tin. It is used for the treatment of skin diseases.

NEOSTAM (Stibamine Glucoside).—Considerable research work has been carried out in the research laboratories of The Wellcome oundation Limited, in connection with Stibamine Glucoside, which is the nitrogen glucoside of Sodium Para-aminophenylstibinate. This substance, which is now issued under the registered brand name of Neostam, is a nearly colorlous powder, readily soluble in water, and keeps well when preserved, as issued ,in sealed glass containers. Solutions are injected.

Neostam is under clinical trial in all conditoins where tartar emetic has hitherto been used. t has given excellent result sin Kala-Azar (Indian Medical Gazette, 1925, volume 60, page 24). The average quantity required for sterilization being 4 grammes per 100 lb. of body weight, admniistered in about 12 doses during one month.

Amongst diseases which suggest themselves for treatment by Neostam are Bilharzia (Schistisomiasis), Oriental Sore and other conditions where there is a Leishmaniasis.
Noestam is supplied in hermetically sealed vials of 0.05 gm., 0.1 gm., 0.2 gm., 0.5 gm., and 1.0 gm.
Manufactured by Burroughs Wellcome & Co. (. S. A.), Inc.

NEO-SILVOL (Colloidal silver iodide compound) is a compound of silver iodide with a soluble gelatin base containing 18 to 22 per cent of silver iodide in colloidal form.
Pale yellow granules. In concentration up to 50 per cent neo-silvol forms with water almost colorless, milky or opalescent solutions (colloidal suspensions). Neo-silvol is insoluble in fixed oils, but slowly soluble in glycerin. Solutions of neo-silvol are not precipitated in the cold by strong acids or sodium chloride.

USES.—Neo-silvol, even in concentrated solutions, causes neither irritation of mucous membrane nor coagulation of albumin. It does not stain the skin. It is claimed that neo-silvol in laboratory tests for germicidal value has been found as effective as phenol in its action on bacteria.
Neo-silvol is intended for the prophylaxis against, and treatment of infections of accessible mucous membranes and is claimed to be indicated in infections of the genito-urinary tract and of the eye, ear, nose and throat.

DOSE.—In the treatment of acute inflammations of the mucous membranes solutions of neo-silvol from 1 to 50 per cent may be used. In inflammatory infections of the ear, nose and throat, 5 to 40 per cent solutions are used; for irrigating sinuses 2 to 5 per cent; for inflammatory conditions of the eye and conjunctival infections in strength 10 to 40 per cent.
Solutions of neo-silvol are prepared by adding the substance to the required amount of water and agitating the mixture until solution occurs.
Manufactured by Parke, Davis and Company.

NEUTRAL ACRIFLAVINE (Acriflavina Neutra).—The base, 3:6-diamino-10-methylacridinium chloride, $C_{14}H_{14}N_3Cl + H_2O$.
A brownish-red, odorless, granular powder. It is soluble in about 3 parts of water, forming a brownish-red solution which fluoresces on dilution and which has a bitter taste; incompletely soluble in alcohol; nearly insoluble in ether, chloroform and the fixed and volatile oils. An aqueous solution of neutral acriflavine (1 : 250) is neutral to congo paper.
USES.—(See Acriflavine.)

NOVASPIRIN (Salicitrin) is a compound of anhydro-methylene-citric acid and salicylic acid.
Novaspirin is a grayish-white, odorless, crystalline powder, permanent in the air, having a faint acidulous taste. It is almost insoluble in water; soluble in alcohol; less soluble in ether or chloroform.
ACTION AND USES.—Novaspirin is employed in the rheumatic condi-

tions, and especially as analgesics and antipyretics in colds, neuralgias, etc. It is used as a gargle in tonsilitis, five grains being dissolved in several ounces of water and used frequently.

NOVASUROL (A brand of Merbaphen).—Novasurol is a double salt of sodium mercuri-o-chlorphenoxylacetate with diethylbarbituric acid.
Novasurol contains 33.9 per cent of mercury in a complex non-ionizable combination. It is employed only in a 10 per cent neutral, sterile solution. It is used in the treatment of cardiac dropsy, cardiac-renal dropsy (cirrhosis of the liver), and nephroses. It is supplied in ampules of 1.2 cc. packed in boxes of 5 ampules. These represent doses of 1 cc., the addition of 0.2 cc. being for waste in administration.

DOSE.—Novasurol may be administered both intramuscularly (intragluteally) and intravenously. The dose ranges from 1 to 2 cc.
Manufactured by the Winthrop Chemical Works, Inc.

NOVATROPINE is said to consist of a combination of mandelic acid and methyltropine nitrate. It occurs in form of a white powder, melting at 162°, very soluble in water, less in alcohol, difficultly soluble in ether and chloroform. It is used for the same purpose as is atropine and homatropine.

NOVOCAIN BASE (Procaine Base).—Para-amino-benzoxydiethylamino-ethane-C_6H_4. NH_2COO. $C_2H_4.N(C_2H_5)_2$.
It is a white, odorless, granular powder, permanent in air, insoluble in water, soluble in alcohol, ether, chloroform and benzene. It is also soluble in fixed and volatile oils.

USES.—Novocain Base is a local anesthetic similar in action to cocaine, but less toxic than cocaine and most other cocaine substitutes. It is non-irritant. It is relatively ineffective when applied to intact mucous membranes.

DOSE.—A 10 per cent solution in expressed almond oil may be used.
Manufactured by The Abbott Laboratories.

NOSOPHEN (Iodophen, Tetra-iodo-phenolphthalein) is a yellow, odorless, tasteless powder, insoluble in water and alcohol. It contains about 60 per cent of iodine, and is used as an antiseptic dusting powder and as an intestinal antiseptic.

DOSE.—5 to 8 grains (0.32 to 0.5 Gm.).

NUMOQUIN BASE (Ethylhydrocupreine Merck) is a bitter white powder, insoluble in water, but soluble in alcohol, oils and fats. It is very stable and keeps well. Numoquin base is supplied as powder in ⅛ oz. vials and also as 2 grain coated tablets in bottles of 30 tablets each, either packing being sufficient for the treatment of one adult case of pneumonia.
Numoquin is supplied in two (2) distinct forms, the base and the hydrochloride.
Numoquin base, which is *not* soluble in water, is used internally in the specific treatment of pneumonia.

Numoquin hydrochloride in aqueous solution or in an ointment is used locally in serpiginous corneal ulcer and by intraspinal injection in pneumococcic meningitis. The hydrochloride is not to be used internally.
Manufactured by Merck and Co.

NUMOQUIN HYDROCHLORIDE (ethylhydrocupreine hydrochloride Merck) has a highly specific bactericidal action upon the pneumococcus. It is synthesized from quinine. Its structural formula indicates its close chemical relation to cuprein, which, together with quinine, is present in cuprea bark. Numoquin hydrochloride occurs as a bitter white crystalline powder, readily soluble in water and alcohol. In dry powder form it is stable and keeps well. As with all alkaloids its solutions and ointments remain serviceable 3 or 4 days onlyl an dshould therefore be freshly made as needed.
Manufactured by Merck and Co.

O

OLEO-BI (Bismuth Oleate).—Oleo-Bi contains Bismuth oleate ($C_{17}H_{33}COO)_3$-Bi in most finely distributed oily suspension, which does not separate even after being kept for months.

USES.—For treatment of syphilis, in all its forms and stages—particularly in cases which are resistant or over-sensitive to arsenic and mercury. It is used also in intermittent treatments in combination with arsenic derivatives.

DOSE.—Oleo-Bi "Roche" is placed on the market in the form of ampules of 2 cc., one ampule being equal to 0.10 Gm. Bismuth. The injection should be made in the outer upper quarter of the gluteal muscle, with a long but not too fine needle, two or three times a week, altogether in the case of adults about 12 to 20 injections of 2 cc. per treatment.
Manufactured by the Hoffmann-LaRoche Chemical Works.

OLESAL is bismuthyldioxpropylaminooxybenzoic acid. It is an antisyphilitic marketed in oily suspension for intramuscular injection. The dose is 0.05 to 0.20 Gm. in 1 to 4 cc. of pure olive oil.

OLGAR AND OLGAR COMPOUND are combinations of agar and heavy liquid petrolatum of high purity and viscosity (American Oil). Olgar Compound has the same formula as plain Olgar with the addition of one and a half grains of phenolphthalein to the ounce. It is designed to meet the requirements of physicians who appreciate the advantages of Olgar but find it desirable to combine an active laxative with it.
Manufactured by Parke, Davis and Company.

OPTANNIN is a basic tannic acid calcium ($CaOH.C_{14}H_9O_9$) with 14.4 per cent calcium oxide and 85.6 per cent tannic acid.

OPTOCAIN "B" contains p-amino-benzo-di-ethyl-amino-ethanol, magnesium salts, and suprarenin in ampoules.

ORIDINE is the calcium salt of the iodized fatty acids of cottonseed oil. It contains from 23 to 25 per cent of iodine in organic combination. Oridine is a light brown powder, almost odorless and tasteless. It is almost insoluble in water, benzene, ether, and alcohol; slightly soluble in chloroform and carbon tetrachloride.

DOSE.—The iodine content of oridine 1 Gm. is approximately equivalent to sodium iodide 0.28 Gm. and to potassium iodide 0.31 Gm. When used for the prophylaxis of goiter, 0.01 to 0.03 Gm. per day are given until 40 doses have been taken.
Manufactured by Eli Lilly and Co.

ORMOSYL (Ovaraden-Triferrin) is an active iron-ovarian hormone preparation in sugar-coated tablets, each containing 9 grains fresh ovarian substance in concentrated form, with 1½ grains paracucleinate of iron.

USES.—It is a tonic in exhausting diseases of women.

DOSE.—1 to 3 tablets t. i. d. after meals.
Manufactured by E. Bilhuber, Inc.

ORTHOFORM (Orthoform-New) is the meta-amino-para-oxybenzoic acid ester of methyl alcohol.
It is a fine, white, crystalline powder, neutral in reaction, odorless and tasteless. Almost insoluble in water; freely soluble in alcohol; soluble in ether. It is decomposed by boiling with water or by warming with alkalies or their carbonates, into methyl alcohol and paraoxybenzoic acid or the alkali salt of it.

USES.—Orthoform is a local anesthetic of slow penetration. It has no action on the unbroken skin.
Orthoform is used internally to relieve the pain of gastric ulcer. It has been applied locally as an analgesic to wounds of every description.

DOSE.—Internally, from 8 to 15 grains (0.5 to 1 Gm.) in emulsion; locally, in substance as a dusting powder or mixed with lactose for insufflation, dissolved in ether and mixed with oil for pencilings, or as an ointment with wool fat, etc.
Distributed by H. A. Metz Laboratories, Inc.

OSCODAL.—The medicinal properties of cod liver oil were originally thought to be due to its nutritive value as a fat and later to its mineral content. It has now been established that the therapeutic effect of the oil is due to its antirachitic and antiophthalmic vitamins. Proceeding from this knowledge, it has been demonstrated that these vitamins, which are growth-promoting, are present in the non-saponifiable portion of the oil and the isolation of these factors has been accomplished in the concentrate developed under the name Oscodal. It is available in tablets, each of which contains the essential principles of approximately one half of one teaspoonful of the highest quality of cod liver oil.

DOSE.—The dose for infants and children is from ½ to 2 tablets; for adults, from 1 to 3 tablets, 3 times daily before meals. In the case of young children the tablet should be crushed and mixed with a little water in a teaspoon.
Manufactured by H. A. Metz Laboratories, Inc.

OVOGAL is a combination of bile acids with egg albumin. Ovogal is a greenish-yellow powder, insoluble in water, dilute acids, ether, benzol, fats, etc. Alcohol and acetone do not dissolve it, but after long action remove from it small amounts of the bile acids. Alkalis dissolve ovogal, splitting it into albumin and bile acids.

USES.—Ovogal is said to pass the stomach without marked decomposition and to be dissolved and absorbed in the intestine.

DOSE.—From 0.5 to 1 Gm. (8 to 15 grains), several times daily, in capsules, with water, tea, coffee or fruit juices.
Manufactured by J. D. Riedel Aktiengesellschaft, Berlin, Germany (Riedel and Co., N. Y.).

OXIPHEN OVALTABS combine the functions of sodium glycocholate and potassium tauro-cholate with certain laxative drugs.

USES.—To increase biliary secretion and to stimulate intestinal peustalsis.

DOSE.—One tablet may be given after the evening meal and one on retiring. Should this dosage prove insufficient, add one tablet after the noon meal. Then increase the bedtime dose to two, if needed.
Manufactured by Pitman-Moore Company.

P

PANALGYN is a specially prepared elixir of strontium and colchicine. Each fluideounce of panalgyn represents strontium salicylate 20 grains, strontium iodide 8 grains, colchicine 1/50 grain, pilocarpine 1/8 grain and gelsemium 1 grain.
It is an analgesic and alterative preparation in which the disagreeable taste of the salicylate and iodide is disguised by an aromatic vehicle.

DOSE.—1 or 2 teaspoonfuls every 3 or 4 hours, followed by a glass of water or milk.
Manufactured by Sharpe and Dohme.

PANDIGITAL is the name given by Crouzel to a digitalis preparation made by macerating 10 Gm. of the finely chopped leaves with 950 cc. of cold water (previously boiled) for 24 hours, filter, plug the funnel and pour 45 cc. of 50 per cent alcohol over the residue on the filter. After six hours of contact, allow filtration to proceed and follow with the aqueous extract obtained in the first operation. To the combined liquids, add 5 cc. of the

tincture of iodine and sufficient water to make 1000 cc. The tincture of iodine does not interfere with the therapeutic properties of the preparation; it is added to impart stability.

PANITRIN is papaverin nitrate with the formula $C_{20}H_{22}N_3O_6$. It is a slightly yellowish fine crystalline, sandy powder, easily soluble in chloroform and acetone, but soluble with difficulty in water and alcohol. It is used in the treatment of ear murmurs and difficulty in hearing. It is marketed in ampuls containing 1 cc. in 20 per cent solution of acetdiethylamide and as an ointment.

PANTOPON-ROCHE (*Pantopium hydrochloricum*) is a mixture of the hydrochlorides of the alkaloids of opium in the proportion in which they exist in Smyrna opium, containing 50 per cent of anhydrous morphine hydrochloride.

Pantopon-Roche (Pantopium hydrochloricum) is a yellowish-gray, crystalline powder which is readily soluble in water.

USES.—Pantopon produces essentially the effects of opium, but, being devoid of its extractive, it may be used for hypodermic administration. It is probably absorbed rather more promptly, and is free from the nauseant odor and taste of the ordinary opium preparations. It is used in the same conditions as those in which opium is indicated.

DOSE.—For adults, 1/12 to 1/3 grain (0.005 to 0.02 Gm.) hypodermically or by mouth.

Manufactured by Hoffman-LaRoche Chemical Works.

PANTOSEPT is dichlorylsulphamido-benzoic acid, containing 21 per cent active chlorine, which on solution in water evolves hypochlorous acid, chlorine and oxygen. It is used as an antiseptic disinfectant, in 0.1 to 1 per cent solution.

PAPAVERINE ($C_{20}H_{21}O_4N$) is an alkaloid obtained from opium, belonging to the benzyl iso-quinoline group (that is, it is not a morphine derivative).

In fine, white rhombic prisms or needles or scales; it is odorless and tasteless. It is nearly insoluble in cold water; slightly soluble in alcohol, ether, chloroform and benzene. It melts at 147°C.

Papaverine is most effective in hypertonic conditions, while it does not interfere materially with the normal movements, for instance of the intestines. It has been used with reported success in various spasmodic conditions of the smooth muscles, especially in all kinds of gastric and intestinal spasms, in biliary colic and in bronchial spasms.

DOSE.—The oral and hypodermic single dose is from 1/2 to 1/3 grain (0.03 to 0.02 Gm.); daily dose to 7½ grains (0.5 Gm.).

PAPAVERINE HYDROCHLORIDE ($C_{20}H_{21}O_4.HCl$).—The hydrochloride of the alkaloid papaverine, containing no less than 88 per cent of papaverine.

USES AND DOSE.—See Papaverine.

Papaverine hydrochloride occurs in a fine, white, crystalline powder or in small monoclinic plates or prisms; odorless and having a bitter taste; permanent in the air. It is sparingly soluble in water; soluble in alcohol; very soluble in chloroform, and insoluble in ether. An aqueous solution of papaverine hydrochloride has an acid reaction toward litmus paper.

PARANOVAL consists of equimolecular portions of diethyl barbituric acid and Na_3PO_4, which decomposes in aqueous solutions to Na_2HPO_4 and sodium diethyl parbiturate. The advantage over veronal is that it is almost tasteless.
The dose is the same as for veronal or barbital.

PARATHORMONE.—This preparation is described as "stable aqueous solution containing the active principle or principles of the parathyroid gland of cattle, and having the property of relieving the symptoms of parathyroid tetany and of increasing the calcium content of blood-serum." It is standardized by its capacity to increase the blood-calcium in normal dogs, one unit being defined as one-hundredth of the amount of solution required to cause an increase of 5 Mgms. of calcium (Ca) in the blood serum of a 20 kilogram dog, the increase of calcium being determined fifteen hours after injection of the solution. The method o fdetermination of blood-calcium is based on precipitation of the calcium by ammonium oxalate, liberation of oxalic acid by means of sulphuric acid, and titration of the free oxalic acid by means of potassium permanganate.
Esperiments with animals have shown that parathormone is cumulative in its effects, and that repeated small doses may raise the blood-calcium to dangerous levels. It must, therefore, be recognized that this product is a very potent therapeutic agent, and its use may be attended with great danger unless due precautions are taken to avoid over-dosage and consequent development of hypercalcaemia.
Manufactured by Eli Lilly and Company.

PARRESINE is a mixture composed of paraffin (melting point 48 to 49°C.), from 94 to 96 per cent; gum elemi, from 0.20 to 0.25 per cent; Japan wax, from 0.40 to 0.50 per cent, asphalt, from 0.20 to 0.25 per cent, and eucalyptol, 2 per cent. The mixture is colored with from 0.5 to 1.0 per cent solution of alkannin in eucalyptol and a minute quantity of gentian violet.
USES.—As a dressing in the treatment of burns.
Manufactured by Abbott Laboratories.

PAVON—"Ciba" is a standardized, constant and permanent opium preparation, which represents the total alkaloids of the drug, and from which inactive substances are eliminated entirely.
INDICATIONS.—Pavon is indicated generally in all cases in which an opium preparation would be prescribed.
DOSE.—One grain of pavon represents two grains of opium.
The normal therapeutic dose is one tablet, one ampule (issued in 1/3 gr. tablets and ampules or about 20 minims of the liquid) one to four times a

day. The maximum single dose should be 3½ tablets, and that for twenty-four hours, 12 tablets.
Manufactured by Ciba Co.

PAVON SCOPOLAMINE is a compound of pavon, and scopolamine hydrobromide in the form of a solution, in ampules for hypodermic use.

USES.—Pavon scopolamine has proved useful for the initiation of anesthesia and the induction of "twilight sleep."

DOSE.—Contents of one ampule to be injected about one-half hour before effect is desired.
Manufactured by Ciba Company.

PERIODOL is a mixture of potassium hypochlorite and iodine, with potassium chloride and potassium iodide. Dissolved in water containing carbonates, it liberates chlorine and iodine. Its antiseptic action is due to the ease with which the nascent chlorine and iodine attack the protein material of the micro-organisms. Aqueous solutions can be made stable by the addition of 10 per cent of sodium chloride.

PERISTALTINE is a primary glucoside obtained from cascara sagrada bark.

USES.—It is an efficient intestinal tonic and laxative for the treatment of chronic constipation, and for the prevention and treatment of post operative intestinal paresis.
Manufactured by the Ciba Company.

PEROGEN BATH.—Oxygen bath salts, Perogen, is a preparation consisting of a catalyzer and sodium perborate capable of yielding 10 per cent of oxygen, the two substances being wrapped separately.

USES.—For preparing oxygenated baths.

DOSE.—One bath daily until 24 or 48 have been taken, with occasional intermission.
Manufactured by Morgenstern and Co., New York.

PHANODORM (brand of Cyclobarbital) is cyclohexenylethylbarbituric acid. Phanodorm is a white crystalline powder, only sparingly soluble in water, but more easily in alkaline solution (intestinal juice). Its melting point is 171° C.

ACTIONS AND USES.—It is recommended in the treatment of nervous insomnia, neurasthenia, hysteria and other types of insomnia in general medical practice.

DOSE.—In the average case, 3 grains (1 tablet). In mild types of insomnia, 1-1/2 grains (1/2 tablet) is often sufficient. Doses exceeding 3 grains and up to 6 grains may be necessary in obstinate cases. To hasten absorption phanodorm should be given with a large amount of warm fluids (weak tea, etc.).

PHENACAINE (Holocaine Hydrochloride) $CH_3C.(NC_6H_4OC_2H_5).(NH.C_6H_4OC_2H_5).HCl.H_2O$.—The hydrochloride of phenetidyl-acetphenetidin, a basic condensation product of paraphenetidin (para-ethoxy-amino-benzene) and acetparaphenetidin (phenacetin). Phenacaine was first introduced as holocaine hydrochloride.

Small, colorless crystals; odorless; faintly bitter and producing transient numbness on the tongue; permanent in the air.

It is soluble in about 50 parts of water; freely soluble in alcohol and in chloroform; insoluble in ether. Phenacaine forms a clear, colorless solution in water, the solution having a neutral or faintly alkaline reaction on litmus.

USES.—Phenacaine is a local anesthetic like cocaine but having the advantage of a quicker effect. Five minims of a 1 per cent solution when instilled into the eye are usually sufficient to cause anesthesia in from one to ten minutes.

DOSE.—It is applied in a 1 per cent aqueous solution. Phenacaine is incompatible with alkalies and their carbonates and the usual alkaloidal reagents. Glass vessels should be avoided in preparing the solution, porcelain being used instead. The solutions are permanent, as the drug is itself antiseptic. They are not injured by boiling.

Manufactured by H. A. Metz Laboratories, Inc.

PHENOCO.—A mixture of coal tar creosote and higher phenol homologues, in soap solution. It is said to contain coal-tar creosote, 20 per cent, phenol homologues, 50 per cent, and soap, 30 per cent.

A dark brown fluid of a characteristic odor like that of coal tar. It is miscible with water in all proportions, forming a white emulsion; it is soluble in alcohol, ether, acetone and in fixed oils, forming clear solutions. It is compatible with physiologic salt solution. When tested by the "phenol coefficient" method of the Hygienic Laboratory of the U. S. P. Public Health Service, it is said to be from twelve to fourteen times stronger, as a germicide, than pure phenol.

It is used in minor surgery, obstetrics, gynecology, ophthalmology, otology, diseases of the skin, etc.

DOSE.—Dilutions from 1 to 5 per cent, or higher, according to the severity of the case.

Manufactured by the West Disinfecting Company, New York.

PHENOLTETRACHLORPHTHALEIN (Phenoltetrachlorphthaleinum).—A dibasic dye formed by the condensation of phenol and tetrachlorphthalic acid or its anhydride.

A pink powder; odorless; permanent in the air. It is practically insoluble in water; very soluble in acetone; soluble in alcohol, ether and glacial acetic acid; slightly soluble chloroform, benzene and carbon disulphide. It dissolves in solutions of the alkalies and carbonates to form solutions which are deep purple when concentrated, but with change to violet-red on dilution, and in very dilute solutions assume a bluish tint (distinction from phenolphthalein).

USES.—Phenoltetrachlorphthalein has been used for the determination of the functional activity of the liver. It can be used, *in form of the sodium salt,* intravenously; it cannot be given subcutaneously or intramuscularly.

DOSE.—From 0.05 to 0.4 Gm. administered in the form of the disodium salt. The solution must not be exposed unduly long, as the salt is sensitive to the action of the carbon dioxide of the atmosphere.

Manufactured by Hynson, Westcott and Dunning.

PHENOSALYL is a mixture composed of 9 parts of phenol, 1 part salicylic acid, 2 parts of lactic acid, 1/10 part menthol. It is used as antiseptic in conjunctivitis and in eczema.

PHENYL-ETHYL-HYDANTOIN (Phenyl-ethyl-glycolyl-urea).—A synthetic hynotic analogous to luminol. The sodium salt, when used, is very soluble in water and is given hypodermically.

DOSE.—0.3 to 0.75 Gm. in 24 hours.

PHYLACOGENS are specific bacterial derivatives, antigenic in nature. They are prepared by growing the bacteria in artificial culture media, filtering out the bacterial bodies from the culture media, and combining the filtrates in definite proportions. In short,, phylacogens are culture filtrates of pathogenic bacteria.

There are six such products intended for the subcutaneous treatment of the specified diseases.

Manufactured by Parke, Davis and Company.

PHYLLOSAN is a chlorophyll-iron preparation prepared according to the directions of Prof. E. Buergi, Director of the Pharmacologic Institute of the University at Berne, Switzerland. It is marketed in tablet form. Two important advantages of the remedy over the iron tonics are that it is well tolerated and that it does not produce constipation. Buergi has shown that there is a close chemical relationship betwe enchlorophyll and haemoglobin, and this preparation has therefore been advanced as a remedy for anaemic.

PHYTINE.—"Ciba," is acid calcium-magnesium-salt of anhydro-oxymethylene-diphosphoric acid (inosit phosphor icacid).

It is a phosphorus derivative extracted from vegetable seeds, furnishing a phosphoric nutritive of high value. While the percentage of the phosphorus content in lecithin is but 3.8, that of phytine is 22.8, or 6 times greater.

USES.—Where phosphorus medication is indicated as a nutrient and dynamic agent.

DOSE.—Adults, 4 tablets daily (issued in 4 Gm. tablets) with meals and at bedtime. To obtain permanent results, it is advisable to continue the medication over a protracted period.

Manufactured by Ciba Co.

PIXALBOL is a colorless liquid tar for the treatment of the skin. Pixalbol (anthrasol) is a pale oil, readily miscible with alcohol, acetone and petrolatum. Pixalbol possesses advantages over crude tar in that it is free from the therapeutically inactive, coloring and irritating constituents.

INDICATIONS.—In subacute and chronic eczema, but not in acute eczema until subsidence of signs of irritation; in pruriginous, non-inflammatory skin affections, parasitic skin diseases, hyperhidrosis, scurf-formation on the scalp, and alopecia. Applied pure as a paint, or in 5-50 per cent ointment or alcoholic solution.

Manufactured by E. Bilhuber, Inc.

PLASMOQUINE.—A synthetic remedy for malaria. Plasmoquine, or plasmochin, is a new synthetic product genetically related to, but not a derivative of quinine, which has recently been introduced as a remedy for malaria. It is a salt of alkyl-amino-6-methoxy-quinoline, and is a tasteless, light yellow, finely granular powder, soluble in alcohol, but very slightly so (0.03 per cent) in water. When ingested, it is readily converted into hydrochloride by the acid of the stomach. It is issued in tablets containing 0.02 Gm. (about 2-5 grain) also in dragees containing a mixture of 0.01 Gm. (1-5 grain) plasmoquine and 0.125 Gm. (about 2 grains) quinine sulphate. At a recent medical conference in Dusseldorf this substance was discussed in several papers. One speaker stated that it had a much wider range of action than quinine, while only one-tenth as much plasmoquine was necessary to secure the same effect. In the malaria treatment of general paralysis it was found that the most effective dose was 0.02 Gm. three or four times a day. In ordinary malarial infections it has received extensive trial, and in some cases has been shown to be superior to quinine. Being tasteless and causing no by-effects, such as tinnitus, giddiness, etc., it may be given to patients who are intolerant of quinine. It seems also to be particularly well tolerated by children.

POISON IVY EXTRACT.

USES.—Poison ivy extract-Lederle (in almond oil) is used to desensitize persons against poisoning with Rhus toxicodendron and to relieve the symptoms of the poisoning.

DOSE.—For protection.—1 cc. injected intramuscularly. For treatment: from 0.5 to 1 cc. injected intramuscularly at intervals of from 24 to 48 hours. Manufactured by the Lederle Antitoxin Laboratories, New York. Aqueous antigens are manufactured by some other concerns.

POTASSIUM BISMUTH TARTRATE WITH BUTYN is a suspension of potassium bismuth tartrate in a mixture of oil, water and a small amount of other ingredients with the addition of the anesthetic, Butyn.

The chemical formula of potassium bismuth tartrate is $C_4H_2O_6Bi_2K\ 4H_2O$. Butyn serves as a local anesthetic at the site of injection.

Caution.—Potassium bismuth tartrate with butyn should never be injected intravenously.

Manufactured by The Abbott Laboratories.

PROCAINE NITRATE ($C_6H_4.NH_2COO.C_2H_4.N(C_2H_5)_2.HNO_3$).—In small colorless and odorless crystals, soluble in water and alcohol. The aqueous solution is neutral in reaction.

USES.—Procaine nitrate is a local anesthetic similar in action to cocaine, but less toxic than cocaine and most other cocaine substitutes. It is non-irritant. It is relatively ineffective when applied to intact mucous membranes. It may be prescribed in combination with silver salts, with which it forms no precipitate.

DOSE.—Used in three per cent aqueous solutions.
Manufactured by H. A. Metz Laboratories, Inc.

PROFLAVINE.—A reddish-brown, crystalline powder. It is insoluble in water and in alcohol, forming brownish solutions which fluoresce on dilution, is nearly insoluble in ether, chloroform, liquid petrolatum, fixed oils and volatile oils.

USES.—(See Acriflavine.)

PROGANOL is a compound of silver and albumose, containing not less than 8.3 per cent of silver in organic combination. From 0.25 to 1 per cent solutions are used in acute gonorrhea, and 5 to 10 per cent installations in chronic cases. In cystitis and urethritis from 1:1000 to 1:2000 solutions are used as irrigations. Used also in forms of bougies and tampons.

PROPOSOTE.—Creosote Phenylpropionate—A condensation product of creosote and phenylpropionate acid. Proposote contains the equivalent of 50 per cent of creosote.

An amber-colored oily liquid, having a characteristic odor, resembling creosote and a slightly bitter taste. It is insoluble in water, soluble in alcohol, ether, and fatty oils. The boiling point of proposote is above 300° C.; its specific gravity at 25° C. is 1.10.

ACTIONS AND USES.—Proposote is not decomposed by the gastric fluids and passes the stomach practically unabsorbed. It is decomposed in the intestines and the components are chiefly eliminated through the kidneys; but it is claimed that a part of the liberated creosote is eliminated through the respiratory tract. It is claimed to be of value in bronchitis and in coughs due to bronchial infection.

DOSE.—For adults, 10 minims (0.6 cc.) in capsules.
Manufactured by Hoffmann-LaRoche Chemical Works, New York.

PROTAN is a chemical combination of casein with tannic acid containing about 50 per cent tannic acid.

USES.—Protan is used as an intestinal astringent in all forms of diarrhea.

DOSE.—For infants and children, from 0.3 to 0.6 Gm. (5 to 10 grains) every hour; in acute catarrhal diarrhea (cholera morbus), from 1 to 2 Gm. (15 to 30 grains) every one or two hours; in chronic diarrhea, from 1.3 to 2 Gm. (20 to 30 grains) every hour or two hours.
Manufactured by H. K. Mulford Co., Phila.

PURIFIED THREE CRESOLS.—A mixture of isomeric cresols, corresponding closely to cresol, U.S.P.
The phenol coefficient is not less than 2.5 (the value is stated on each package). The phenol toxicity, determined by the method of Hale, is not greater than 150 per cent (the value is stated on the package).
Manufactured by the H. K. Mulford Company, Philadelphia.

PYRANTIN (Phenosuccin), $C_6H_4(OC_2H_5)N:(COCH_2\text{-}CH_2\text{-}CO)$.—It is prepared by melting together p-amidophenol and succinic acid and crystallizing the product from alcohol or acetic acid solution. Colorless, prismatic needles. Its uses are similar to acetphenetidin; valuable in acute rheumatism.
DOSE.—15 to 45 grains (1 to 3 Gm.) per day.

PYRIDIUM is a colloidal condensation product of phenyl-azo-diamino-pyridine-hydrochloride. It occurs as a fine brick red microcrystalline powder slowly soluble in cold water, but soluble in boiling water, alcohol, glycerin, petrolatum, lanolin, etc.
USES.—Pyridium displays exceedingly strong bactericidal properties toward several types of bacteria and in particular toward those of the cocci genus.
DOSE.—It is used internally in doses of 1½ grains (0.1 Gm.) for its bactericidal value. Locally in 1 per cent aqueous solution.
Manufactured by Merck Co.

Q

QUININE-PHYTINE "Ciba," is anhydro-oxymethylene-diphosphate of Quinine. It combines the important therapeutic properties of phytine and quinine, and constitutes an organic phosphate of quinine of definite chemical composition. Quinine-phytine contains 58 per cent of quinine, and is readily soluble in water. One gram of quinine-phytine represents 0.5 Gm. of phytine, and corresponds to 0.7 Gm. of quinine hydrochloride, or to 0.8 Gm. quinine sulphate.
INDICATIONS.—In the treatment of malaria and where quinine is otherwise indicated.
DOSE.—2 or 3 tablets several times daily.
Manufactured by Ciba Co.

QUINISAL is a delnite chemical compound-quinine bi-salicylosalicylate and occurs as a white, odorless, crystalline powder having a slightly bitter taste. It is practically insoluble in water, but in the dilute acid gastric juice it separates into quinine and Salysal (salicylo-salicylic acid). Not until it reaches the intestines is the Salysal hydrolized, there liberating salicylic acid, and thus avoiding the gastric irritation common with other salicylic preparations. A four grain quinisal tablet yields the approximate equivalent of two grains of quinine and 2½ grains of salicylo-salicylic acid.

USES.—Quinisal is useful wherever combined quinine and salicylic medication is indicated, particularly in painful and febrile diseases, such as rheumatism, tonsilitis, lumbago, influenza and neuralgia. Inadd ition to its freedom from gastric irritation, it has the great advantage of permitting a more prolonged action with less depression.

DOSE.—The adult dose is 4 to 8 grains repeated 4 to 6 times at intervals of about 2 hours.

QUINOFORMOL is a surgical antiseptic, designed to replace Dakin's Solution in certain cases. The following is the formula:

Quinine sulphate	1.0 Gm.
Hydrochloric Acid	0.5 cc.
Glacial Acetic Acid	5.0 cc.
Sodium Chloride	17.5 Gm.
Solution of Formaldehyde	1.0 cc.
Thymol	0.25 Gm.
Alcohol (90 per cent)	15.0 cc.
Water .....To make	1000 cc.

R

RESOPHAN is a compound of resin and sulphur marketed as a colloidal aqueous solution, and also in the form of ointment, bougies and dusting powder. It is used as an antiseptic.

RESORCINOL MONOACETATE (Resorcin Acetate) $C_6H_4(OH).(OOC\text{-}CH_3)$.

USES.—The action of resorcinol monoacetate is similar to that of resorcinol, but milder and more lasting. It is used in the treatment of acne, chilblains, and particularly in the treatment of alopecia and seborrhea.

Resorcinol monoacetate is a viscous, lemon yellow liquid, boiling under ordinary pressure at 283° C. with decomposition. It is soluble in alcohol, acetone and most organic solvents; sparingly soluble in water. It has a faint characteristic odor and burning taste. Resorcinol monoacetate, at a pressure of 10 mm., distils completely between 150 and 153° C.

DOSE.—Resorcinol monoacetate is applied in ointments of from 5 to 20 per cent and in acetone solution. For scalp lotions, alcoholic solutions of from 3 to 5 per cent are used.

Manufactured by the Eastman-Kodak Co., Rochester, N. Y.

RIODINE is a 66 per cent solution in oil of an iodine addition product of castor oil. It contains about 17 per cent of iodine.

USES.—It is used as a substitute for the inorganic iodides, over which it is claimed to have an advantage in that it is longer retained and therefore better utilized.

DOSE.—From 0.4 to 1.2 Gm. (6 to 18 grains) per day, in capsules, taken after means. Supplied only in the form of capsules.
Manufactured by P. Astier Laboratories, Paris and New York (Gallia Laboratories, Inc., N. Y. Distributors).

RIVANOL is an acridine compound having particularly powerful action against streptococci and staphylococci. Its chemical name is 2-ethoxy-6.9-diamino-acridine hydrochloride. It is a pale yellow powder, soluble 1:260 cold water and 1:28 hot water, forming a yellow solution. It is used as an antiseptic for wounds, suppurations, etc.

INDICATIONS.—It may be employed in any condition requiring the local application of an active germicide. It is used by instillation, irrigation, gargle, wet dressing, moist gauze packing and tampon. The solution of proper strength may be applied hot or cold.

DOSE.—1-500 to 1-10,000 aqueous solutions locally.
Manufactured by H. A. Metz Laboratories, Inc.

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SABROMIN Ca $(C_{21}H_{41}Br_2.COO)_2$.—Sabromin contains not less than 28.5 per cent of bromine.
Sabromin is a yellowish-white powder; odorless and tasteless. It is insoluble in water and alcohol, but soluble in ether, chloroform, acetone, benzene, petroleum benzin and carbon tetrachloride.

Sabromin is said to be converted in the stomach into dibrombehenic acid, and this is absorbed from the intestinal tract. The absorption and elimination are slower than that of the inorganic bromides; hence, sabromin is adapted only to conditions in which a gradual saturation of the system with bromine is required. It is indicated in conditions in which the bromides cannot be administered for continued periods without gastric disturbance or in which brominism is caused readily.

DOSE.—The dose is 5 to 20 grains (0.3 to 1.2 Gm.).
Distributed by The Winthrop Chemical Company.

SALEN "Ciba"—represents the methyl and ethyl glycolic acid esters of salicylic acid.
It is an oily liquid, superior to other salicylic esters in that it is odorless, entirely unirritating and stable.

USES.—As a general local analgesic. It may be applied to the affected part by means of a brush, or mixed with chloroform and olive oil, 5 Gm. of each ingredient, and applied as a paint. After application, the part may be gently rubbed and covered with a light dressing.
Manufactured by Ciba Co.

SALETHYL is a chemically pure ethyl salicylate, transparent, colorless, and volatile, with a pleasant characteristic odor and taste.
Salethyl, or ethyl salicylate, is a physical cogener of methyl salicylate. Both products are made by distilling salicylic acid or a salicylate with alcohol—ethyl or methyl, as the case may be—and strong sulphuric acid.

USES.—As an analgesic and anti-rheumatic (internally).

DOSE.—5 to 15 minims several times daily.
Manufactured by Parke, Davis and Company.

SALICARIN is the glucoside extracted from the purple loosestrife (*Lythrum salicaria*), a liquid extract of which plant has been found useful in diarrhea. Salicarin is given in solution or in tablets, in doses of 0.1 to 0.5 Gm., and is said by Caille to give the full therapeutic effects of the drug.

SALIFORMIN (Formin Salicylate, Hexamethylenetetramine Salicylate, Urotropin Salicylate $(CH_2)_6N_4C_6H_4(OH)COOH$ is a white powder, having a sour taste; soluble in alcohol and water. Used as a urinary antiseptic and as a solvent for uric acid deposits.

DOSE.—15 to 30 grains (1 to 2 Gm.).

SALIGENIN ($C_6H_4(OH).CH_2OH$) occurs as white rhombohedral plates, or as a white crystalline powder, permanent in air; odor faintly aromatic; taste slightly burning, followed by a sense of numbness. It is soluble in water and chloroform; freely soluble in alcohol and ether and in the fixed and volatile oils.

USES.—Saligenin is a local anesthetic similar in action to procaine. It is said to be as effective as procaine but much less toxic; also the anaesthesia produced lasts longer and for this reason the addition of epinephrine is not necessary. Weak solutions are relatively ineffective when applied to intact mucous membranes, but strong solutions (12 per cent) exert a definite numbing effect.

DOSE.—A 10 per cent solution in expressed almond oil may be used.

SALIPYRIN is a weak chemical combination of antipyrine and salicylic acid.

USES.—It possesses the properties of both antipyrine and salicylic acid and combines the analgesic power of the one with the antirheumatic action of the other.

DOSE.—From 0.3 to 2 Gm. (5 to 30 grains) in cachets or capsules.
Manufactured by J. D. Riedel, Brooklyn, N. Y.

SALYRGAN is a 10 per cent solution of mercury-salicylallylamide-o-acetate of sodium.
Salyrgan is a synthetic, nonionizable mercurial compound containing approximately 36.5 per cent mercury.

INDICATIONS.—Salyrgan is an effective antisyphilitic and is employed as a synergist to the salvarsans, either independently or admixed with their solutions.

Salyrgan possesses powerful diuretic properties and therefore its field of usefulness has been extended to the treatment of dropsies due to cardiac disturbances.

DOSE.—The adult dose, both as a diuretic and as a synergist to the salvarsans, ranges from an initial administration of 0.5 cc. to the maximum of 2 cc. generally given at intervals of 3 days.

Salyrgan may be administered intravenously or intramuscularly.

Manufactured by H. A. Metz Laboratories, Inc.

SANOCALCIN is a mixture of calcium salts (glycerophosphate and lactophosphate) which is soluble in about 100 parts of water. It is marketed as a powder, in tablets and as a sterile solution in cases of malnutrition and in tuberculosis.

SANTYL is the salicylic acid ester of santalol.

USES.—It is said that santyl passes the stomach unchanged, but is slowly split up in the intestines into its constituents, santalol and salicylic acid. Uses as of Santal oil.

DOSE.— 1.5 cc. (24 minims) usually given in 4 capsules of 0.4 cc. (6 minims) each, three times a day. It is incompatible with alkalies and with the usual incompatibles of the sandalwood oil and of salicylates.

SCARLET RED MEDICINAL BIEBRICH is a compound of betanaphthol and diazotized amido-azo-ortho-toluol.

It forms a dark, brownish-red powder, nearly insoluble in water, slightly soluble in benzene and acetone and easily soluble in chloroform, oils, fats and phenols. It is slightly soluble in cold alcohol, somewhat more soluble in hot alcohol, while warm petrolatum and paraffin dissolve rather large quantities.

USES.—Scarlet red medicinal Biebrich and scarlet red sulphonate have a marked power of stimulating the growth of epithelial cells, and are used for that reason in the treatment of burns, wounds, chronic ulcers, etc.

The scarlet red preparations are generally used in the form of an ointment containing from 4 to 8 per cent of the substance. The 8 per cent ointment is somewhat irritating and should be alternated with a soothing ointment.

SCARLET RED SULPHONATE is the sodium salt of azo-benzene disulphonic acid azobetanaphthol. It is a dark, brownish-red powder; odorless. It is soluble in water; slightly soluble in ether, alcohol and acetone; almost insoluble in chloroform, benzene, fixed oils, fats and petrolatum.

USES.—Scarlet red sulphonate has a marked power of stimulating the growth of epithelium in the treatment of burns, wounds, chronic ulcers, etc. A 4 to 8 per cent ointment is generally used.

SCILLAREN "SANDOZ"—A brand of "Glucosidum e Scillae" represents the cardio-active principle of squill. Scillaren is an absolutely pure crystallized substance, soluble in water. Because of its definite character and stability, exactitude of dosage is assured. It is available in tablets and in solution for oral administration, and in ampules for *intravenous use.* Scillaren is well tolerated when given by mouth and intravenously but *should not be injected intramuscularly.*

DOSAGE.—For oral administration: One tablet or 20 drops of solution, 3 to 6 times daily. For intravenous administration: One ampule of 1 cc. per day, in divided doses if considered advisable; when given as one dose, a second injection of 1 cc. may be administered the same day after an interval of 8 hours.
Manufactured by H. A. Metz Laboratories, Inc.

SECALOPAN is a preparation, in extract form, prepared by "Ciba" in Basel. Uhlmann and Mirmelstein have subjected the preparation to exhaustive experimentation and conclude that it contains all active substances found in ergot and that as far as action is concerned the extract compared to the drug as 2 to 1. The investigators claim to have subjected 15 preparations made from ergot, including secalopan, to a most searching examination, and that the latter yielded the most consistent results.

SECACORNIN (Ergotin-Roche) is a solution of the active principles of ergot in a menstruum consisting of distilled water, glycerin and 7.5 per cent of alcohol. One cubic centimeter of secacornin corresponds to 4 Gm. of ergot U.S.P.
Secacornin is a dark brown solution, said to be sterile. It is claimed that it does not deteriorate on keeping.

USES.—The same as those of ergot.

DOSE.—8 minims (five-tenths c.c.) is equivalent to 30 minims (2 cc.) of fluidextract of ergot, U.S.P. It may be given by intramuscular injection in doses of from 8 to 15 minims (0.5 to 1 cc.).
Manufactured by Hoffmann-LaRoche and Company.

SECRETOGEN is a homostimulative extract from the duodenum.
A homostimulative extract from the stomach and duodenum; contains 1/10 of 1 per cent HCl.

USES.—A physiological treatment of gastrointestinal insufficiencies and constipation, intestinal stasis, infantile diarrheas, marasmus and inanition.
Manufactured by G. R. Carnrick Co.

DOSE.—1 to 3 teaspoonfuls before or after meals.

SEDASPRIN is a chemical compound of bromine (30.86 per cent) and acetyl-salicylic acid or aspirin (69.14 per cent), and combines the action of these drugs. It is suggested as a sedative in all forms of nerve trouble.
DOSE.—5 to 10 grains.

SEPTICEMINE is a French preparation occasionally used by American physicians and stated to be iodobenzomethyl-di-urotropine. An intravenous antiseptic in acute infectious diseases. It is marketed in ampules of 4 cc.

SILVER ARSPHENAMINE is the sodium salt of silver-diamino-dihydroxy-arseno-benzene. It contains approximately 20 per cent of arsenic and approximately 15 per cent of silver. It is a brownish-black powder, unstable in air. When properly dried it is free from lumps. It is readily soluble in water, yielding a dark-brown solution (distinction from arsphenamine and neoarsphenamine), the solution has an alkaline reaction (distinction from arsphenamine).

USES.—Silver arsphenamine has practically the same uses as those of arsphenamine. Its claimed advantages over other arsphenamine preparations are said to be due to the introduction of the silver (nonionizable form) as a component, thereby improving the chemo-therapeutic index, presumably because of the fact that silver and its compounds have a decided antisyphilitic value.

DOSE.—From 0.1 Gm. to 0.3 Gm. for adults. The treatment should begin with an injection 0.1 Gm., gradually increasing the dosage at intervals of not less than four days to 0.2 Gm. maximum in women and 0.3 Gm. in men.

In preparing the solution for injection, the ampule is first sterilized by immersion in alcohol for fifteen minutes; after opening the ampule, the contents are sprinkled on the surface of 5 cc. of cool (20-22° C.) sterile distilled water, contained in a small sterile flask. The silver arsphenamine will go into solution rapidly; heating and shaking must be avoided. A quantity of cool sterile solution of sodium chloride, 0.4 per cent, is then added so that the final solution will approximate 20 cc. of liquid per decigram (0.1 Gm.) of the drug. The solution must be administered promptly.

Manufactured by H. A. Metz Laboratories and others.

SILVOL is a suspension of silver in colloidal form in an alkaline proteid, forming a non-irritating antiseptic silver preparation. In the manufacture of this product particles of metallic silver in a state of extremely fine subdivision are enveloped in a coating of an albuminoid substance.

It is not a silver salt and therefore does not give the chemical reactions of the nitrate or other salts of silver.

Silvol occurs in the form of brown, lustrous scales which are freely soluble in water in all proportions, the product being non-staining and light colored.

USES.—Silvol has been tested against a variety of pathogenic bacteria, and the results warrant the conclusion that it is satisfactorily germicidal when used in a proper manner.

Manufactured by Parke, Davis and Company.

SIOMINE.—Methenamine tetraiodide $(CH_2)_6N_4I_4$—It contains 78.5 per cent of iodine. It is decomposed with the intestine with formation of hexamethylenamine and iodide, the rate of absorption and excretion being essen-

tially the same as that of inorganic iodides. The administration of siomine provokes the luetin reaction. Hexamethylenamine is present only to render the substance insoluble.
Siomine is a bright red powder, having a slight, but characteristic odor and taste. When heated to 138° C., it decomposes with violence.
Siomine is slightly soluble in acetone, alcohol, chloroform, carbon disulphide, and ether (with partial decomposition).
DOSE.—One to five grains as indicated.
Manufactured by Pitman Moore Company and others.

SISTOMENSIN "Ciba."—The specifically active hormone of the corpus luteum. Sistomensin acts as a physiological regulator of menstruation in cases of hyperfunction.
USES.—It is said to exert an inhibitory influence upon the menstrual function by confining it to normal physiological limits. It may be described as a physiological regulator of the menstrual function.
DOSE.—One to two tablets (issued in 1/5 grain tablets) three times daily. Or, one to two capsules (issued in 4/5 grain ampules) may be deeply injected, subcutaneously or intramuscularly, once daily. It is non-toxic, and may be administered in any dose considered necessary for individual use. Oral and hypodermic medication may be combined.
Manufactured by Ciba Co.

SKIABARYT is a special preparation of the purest barium sulphate "for X-ray diagnosis" offered in a form by means of which the excellent shadow-forming properties are enhanced while the difficulties and disadvantages attending the administration of barium sulphate itself are minimized.
Manufactured by Merck and Company.

SODIUM ARGENTO-THIOGLYCERINE-SULPHONATE.—This compound is recommended for use as an intestinal disinfectant. It is a yellow powder containing 35 per cent of metallic silver. It is readily soluble in water; is not precipitated by sodium chlorides nor ovaalbumin. Its antiseptic powder varies between 1 in 5000 and 1 and 100,000 depending on the organism. It is non-toxic.

SODIUM ARSPHENAMINE.—The sodium salt of 3-diamino-4-dihydroxy-1-arsenobenzene. The arsenic content of 3 parts sodium arsphenamine is equivalent to 2 parts of arsphenamine.
Sodium arsphenamine is a bright yellow powder, very unstable in air; when properly dried it is free from lumps. It is readily soluble in water, yielding an orange-yellow solution; the solution has an alkaline reaction (distinction from arsphenamine).
USES.—The same as those for arsphenamine; its advantage over arsphenamine is that it does not require addition of alkali before use.
DOSE.—From 0.45 to 0.9 Gm. for adults. The quantity of sterile distilled water used for effecting solution should be in the proportion of 20 cc. for

each 0.1 Gm. of the drug. Heating must be avoided in the preparation of the solution and any difficultly soluble preparation should be discarded.
The solution must be administered promptly.
Manufactured by the Diarsenol Laboratories, Inc.

SODIUM CITROBISMUTHATE is a stable combination of bismuth citrate with sodium citrate used as an antisyphilitic by injection. The method of preparation is not given, but it apparently consisted of treating bismuth citrate with a large excess of sodium citrate and probably also with a little alkali. The resulting solution is strongly hypertonic and is non-toxic. Treated with alcohol it gives a crystalline precipitate containing one molecule of bismuth citrate and six of sodium citrate.

SODIUM RICINOLEATE (Merrell) is a 40 per cent solution of the sodium salt of Ricinoleic Acid from the castor bean, in double distilled water. It is a clear, slightly yellowish, syrupy fluid, almost entirely free from the characteristic odor and taste of castor oil, but when diluted with water containing calcium salts, quickly developing such odor and taste to a slight degree. In the presence of these calcium salts it also combines with them forming an insoluble calcium soap, thereby materially lessening its degree of activity.
USES.—As an antiseptic wash or wet dressing in the treatment of infections due to the streptococcus and other pellicle-forming bacteria. (½ to 2 per cent aqueous solutions are used.)
In pus and pyorrheal pockets, infected tooth sockets and pulps, Vincent's infection, tonsil, sinus and antrum infections, and in industrial wounds, it has proved extremely effective.
Manufactured by Wm. S. Merrell Co.

SODIUM TARTROBISMUTHATE.—Sodium bismuth tartrate is an analogue of tartar emetic, and a new remedy for syphilis. It is given intramuscularly, suspended in olive oil, the dose being 0.2 Gm. every 2 days, to reach a total of 2-2.5 Gm. in 3 or 4 weeks. The following formula for its preparation is given:

Bismuth Subnitrate	70
Sodium potassium tartrate	64.5
Nitric Acid	57
Sodium Bicarbonate	57

Dissolve the bismuth subnitrate in the nitric acid mixed with an equal quantity of water; add the sodium potassium tartrate dissolved in a little water and then the sodium bicarbonate also dissolved in a little water; heat to expel CO_2; filter and wash the precipitate till free from nitrates. To the washed precipitate add 230 cc. normal solution of NaOH.

SOFOS is a mixture of sodium dihydrogen phosphate and sodium hydrogen carbonate (sodium bicarbonate), sterilized by coating the particles of one of the constituents with disodium hydrogen phosphate. One part of sofos has the same phosphate value as 1.75 parts of sodium phosphate, U.S.P.

USES.—When sofos is treated with water, sodium phosphate (Na_2HPO_4) is formed and carbon dioxide is set free. It has the physiologic action of sodium phosphate.

DOSE.—For adults, from 5 Gm. to 15 Gm. (1 to 4 drachms) in a glassful of water, taken before effervescence ceases.

Manufactured by the General Chemical Company, New York.

SOLARSON (Brand of Chlorarsenol) is a 1 per cent solution of ammonium heptenchlorarsenate, rendered isotonic with sodium chloride.

In arsenic content 1 cc. containing about 0.01 Gm. of Solarson, corresponds to 0.004 Gm. of arsenous acid.

It is supplied only in ampules of 1.2 cc. boxes of 10. These represent doses of 1 cc. the addition of 0.2 cc. being for waste in administration. It is used as a tonic and as an alterative in anemia, chlorosis, neuroses and various skin diseases.

DOSE.—Subcutaneous or intramuscular injections of 1 cc. are made daily or twice or thrice weekly. After 10 to 12 injections treatment is suspended for a week or more, and then another course of injections is given the dose being increased to 2 cc. if necessary. It has also been employed intravenously.

Manufactured by The Winthrop Chemical Company.

SOLMIDES large contain five grains each of the bromides of ammonium, sodium and potassium. Solmides small contain two and one-half grains each of these bromides.

They are recommended in the treatment of all conditions in which the bromides are indicated. In effervescent form the outstanding advantages are palability, solubility and elegance of method of administration.

Manufactured by Sharpe and Dohme.

SOLUBAINE is a solution of ouabaine 1:1000, for the treatment of cardiac insufficiency, in the place of strophanthus.

DOSE.—10 to 40 drops.

SOZAL (Aluminum Paraphenol-sulphonate), $C_6H_4(OH)SO_3)_3Al$ Antiseptic. It is used in a 1 per cent solution as a wash.

STOVAINE is the hydrochloride of 2-benzoxy-2-methyl-1-dimethylamino butane. It forms small, brilliant scales, which melt at 175°C. Extremely soluble in water, it requires 5 parts of absolute alcohol for solution and is only slightly soluble in acetone. It is quite stable and its solutions may be sterilized at 115°C. without suffering decomposition. It is precipitated by all the alkaloidal reagents and is decomposed even by very dilute alkalies.

USES.—Stovaine is a local anesthetic, similar to cocaine but less toxic.

DOSE.—Internally, 1/30 grain (0.002 Gm.) in pill form. Locally it may be used in the eye in 4 per cent solution and applied to other mucous mem-

branes, in from 5 to 10 per cent solution. For hypodermic injections for local anesthesia it can be used in 0.75 to 1 per cent solution.
Manufactured by Poulence Frères Company, Paris, France, and distributed by Geo. J. Wallau, Inc., New York.

STOVARSOL is the acetyl derivative of 3-amino-4-hydroxyphenyl-1-arsonic acid, containing from 27.1 to 27.4 per cent of arsenic (As).
It is a white, odorless powder, having a slightly acid taste. It is slightly soluble in water and alcohol. It is stable at ordinary temperatures.

USES.—Stovarsol has been reported to produce favorable effects in the treatment of amebic dysentery.

DOSE.—Orally, 0.25 Gm. for adults; two or three doses a day for a period of seven days has been reported to give satisfactory results.
Manufactured by Powers-Weightman-Rosengarten Company.

STOVARSOL SODIUM is the sodium salt of oxy (4) acetylamino (3) phenylarsinic acid. See Stovarsol.

STYPTOL (requires official narcotic order blank) (neutral cotarnine phthalate).
A uterine hemostatic and sedative.

USES—Styptol is especially valuable in menstrual hemorrhage and in dysmenorrhea. It reduces irritability and sensitiveness to pain of the uterine nerves and of the entire hypogastric plexus.
It has a sedative action also on the central nervous system and no toxic influence on the heart.

DOSE.—2 or 3 tablets three times a day.

SUBCUTIN ($C_2H_5COO.C_6H_4NH_2SO_3H.\ C_6H_4OH$) is a white, crystalline powder, used as a local anesthetic, non-toxic and distinctly germicidal.

SUBLAMINE (Mercuryethylenediamine sulphate—$HgSO_4.2C_2H_4(NH_2)_2 + 2H_2O$) is a non-irritating, penetrating, readily soluble disinfectant. It is used in hand disinfection in solutions of 1 to 1000 to 1 to 2000.

SULFIFORMINE is an antiseptic which was discovered before the war, but which attained greater prominence on the battlefield. It is formed by the reaction between sulphur dioxide and formaldehyde vapor and, according to Philippe Malvezin, has the structure $CH_2(OH)SO_3H$. Its reactions have been studied by M. Malvezin, who finds that the most significant ones are those with potassium permanganate and with aniline; with permanganate in the dry state it reacts violently and a gas, probably oxygen, is given off. Its reactions on aniline and aniline salts are curious and, according to the author, offer possibilities of making use of sulfiformine in dye-stuff manufacture.

SULFOBADIN is a new sulphur preparation for baths. It contains a sulphurized oil in a solvent rich in sulphur, which because of its peculiar method of preparation, enters into chemical combination with the solvent.

The effectiveness rests upon its property of forming colloidal sulphur after resorption. No odor is noticeable after its use. It is recommended for use in eczemas, acne, etc.

SULPHARSENOL is a French preparation composed of arsenobenzol with glycol and sodium acid sulphite, is said to be very active therapeutically and much less toxic than arsenobenzol, while its solutions are very stable. The dose is 0.06 to 0.9 cgm., given intravenously. It is easily soluble in water, 0.75 Gm. dissolving in 2 cc. and does not change on exposure to air. Levy-Bing and Gerbay find it most useful for giving by the intramuscular route. F. C. Doule speaks most favorably of it. He gives it hypodermically in the forearm, 0.42, 0.48 and 0.6 Gm. in 8 to 10 minims of distilled water. He describes it as the ideal method for infants and for those with difficult veins. It has no side effects, and its results are equal to those of arsenobenzol, though slower.

SULPHARSPHENAMINE.—This new product has an arsenic content of from 19 to 24 per cent.
It is an orange-yellow powder possessing an odor resembling that of sulphur dioxide and arsine. It is readily soluble in water yielding a yellow solution which is acid to litmus (distinction from neoarsphenamine which is neutral and sodium arsphenamine which is alkaline). On standing overnight, the solution darkens and a precipitate is formed.

USES.—The same as those of neoarsphenamine, over which it is claimed to have the advantage of a higher chemotherapeutic index, more prolonged action, lower toxicity, a somewhat greater stability of solution in the presence of air, and of permitting subcutaneous injection.

DOSE.—For intramuscular or subcutaneous use the drug is dissolved in sterile, freshly distilled water in the proportion of about 0.1 Gm. to 0.3 cc.; for intravenous use a greater dilution is desirable, about 0.1 Gm. to 2 to 3 cc.

SURGODINE is a miscible iodine containing 2.25 per cent of available iodine.
It is especially adapted for surgical use. It contains no potassium iodide or glycerin and is miscible with alcohol or water in any proportion.
Manufactured by Sharpe and Dohme.

SUXIPHEN (Eskays) formerly Tussiphen.—Eskay's Suxiphen is a combination of medicaments for the relief of bronchitis and other spasmodic conditions of the respiratory tract. It represents in each fluid ounce: Sodium Mono Benzyl Succinate, 4 grains; Ipecac, 2 grains; Squill, 3 grains; Sanguinaria, 4 grains; Phenolphthalein, 1 grain; Alcohol, 24 minims; and Mentholated Syrup of Tolu. It contains no narcotic or habit-forming drug, and its use requires no official narcotic order blank.

USES.—Sodium Mono Benzyl Succinate is a recent addition to the group of benzyl esters, first made known therapeutically by the pharmacological and clinical studies of benzyl benzoate by Macht of Johns Hopkins University in 1919. It relaxes spasmodic contraction of non-striated muscle and is free from toxicity or habit-forming tendencies.

DOSE.—One teaspoonful as indicated.
Manufactured by Smith, Kline and French Company.

SPIROSAL is the salicylic acid ester of monoglycol.
It is an almost odorless and colorless oily fluid, with a boiling point of from 169° to 170°C. at 12 mm. pressure. It is easily soluble in alcohol, ether, chloroform and benzol and soluble in about 110 parts of water and 8 parts of olive oil.
ACTIONS AND USES.—When applied to the skin, about one-fifth to one-sixth of the amount used is absorbed and it causes very little irritation even when rubbed in thoroughly.
DOSE.—It is used undiluted or mixed with from 2 to 3 parts of alcohol or in a mixture with olive oil, 1 to 8, or in ointments with equal parts by weight of petroleum or lard.
Distributed by The Winthrop Chemical Company, Manufactured by The Bayer Company.

STEARODINE is the name given to a combination of stearic acid and iodine which is supplied in tablet form for use in the prevention and treatment of goiter. The body of the tablet is of chocolate.
Stearodine is claimed not to disturb the stomach. Passage to the intestine is uneventful, but here the iodine is liberated from its chemical bonds and absorbed into the blood.
Each tablet contains 1/6 grain of iodine in combination with stearic acid.
DOSE.—For prophylactic purposes (against goiter) one tablet weekly. Otherwise according to iodine content.
Manufactured by Parke, Davis and Company.

STORAXOL is an ointment containing storax, resorcin, menthol, camphor, carbolic acid (5 per cent), and lac sulphur. The method of manufacture and the nature of the base result in a smooth ointment that is rapidly absorbed by the skin, bringing active ingredients into intimate contact with the deeper layers of the skin.
Storaxol is used in the treatment of eczematous conditions, pruritus ani, pruritus vulvae, scabies, "ground itch," ringworm, hemorrhoids, fissures, and varicose ulcers.
Manufactured by Parke, Davis and Company.

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TANNALBIN is tannin proteinate exsiccated.
USES.—Tannalbin passes the stomach without causing gastric disturbance. As the tannalbin is split up but gradually in the intestinal tract, the astringent and anti-diarrheal action of its tannin persists well into the lower portions of the large intestine.

DOSE.—15 to 30 grains several times a day. Children in reduced amounts.
E. Bilhuber, Inc., Agents.

TANNIGEN (a brand of Acetannin) is the aceticacid ester of tannic acid. It is indicated as an astringent in the treatment of enteritis, colitis, cholera infantum and dysentery.
It is a light gray powder, almost odorless and tasteless; insoluble in dilute acids and cold water; soluble in alcohol. Alkalies decompose it and should not be used in connection with it.
DOSE—Adult dose, 8 to 15 grains (0.5 to 1.0 Gm.), beginning with a large dose; children, one-half this quantity. May be administered in a mixture with equal parts of sugar of milk, stirred in water, or added to the food, avoiding warm or alkaline fluids.
Manufactured by The Winthrop Chemical Works.

TARGESIN is a diacetyltannin-silver combination containing about 6 per cent of silver. It is said to combine the action of the colloidal silver preparations with that of tannin.

TENAMIN (formerly known as Tenosin).—Tenamin is a brand of Amergine. It consists of hydrochlorides of p-oxyphenylethylamin and b-imidazolethylamin.
Tenamin consists of two active principles of ergot, betaimidazolethylamin and paraoxyphenylethylamin, in the form of hydrochlorides. The relative proportion of the former to the latter is 1 to 50. It is a clear solution, free from ergotoxin and inert matter.
It is a uterine hemostatic, used in the treatment of post-partum bleeding, metrorrhagia and in other indications of ergot.
DOSE.—The average dose of liquor tenamin is 15 to 20 drops, three or four times daily, according to the indications. Tenamin ampules are employed for subcutaneous and intramuscular injection (*never intravenously*), where a rapid effect is desired. The dose is 1 cc. repeated if necessary.
Manufactured by The Winthrop Chemical Company, Inc.

TETRABROMPHENOLPHTHALEIN SODIUM—The sodium salt of a dibasic dye, tetrabromphenolphthalein contains about 47 per cent of bromide. A purple powder, odorless, and very soluble in water. It is very slightly soluble in alcohol, insoluble in ether.
ACTIONS AND USES.—Tetrabromphenolphthalein sodium is used for the roentgenologic examination of the gall bladder.
DOSE.—A dose of 0.1 Gm. per kilogram has been found sufficient to cast a shadow. To visualize the gall bladder in the patient, 4.5 to 5 Gm. of tetrabromphenolphthalein sodium (which has not undergone change by exposure to light) are dissolved in 35 to 40 cc. of freshly distilled water and filtered. The solution is then sterilized by heating the container in boiling water for twenty minutes. This dose is sufficient for a person weighing 125 pounds or more and should be reduced for patients weighing

less. The solution is given intravenously with a syring ein two doses, one-half hour apart, in the morning before breakfast.

TETRADOL (the sodium salt of tetraiodophenolphthalein) is used for visualization of the gall bladder, in the form of specially prepared capsules for oral administration. These capsules resist the acid gastric juice and are freely soluble in the small intestines. Practically all of the dye administered is therefore available for absorption.
(See Tetraiodophthalein.)
Manufactured by the National Aniline and Chemical Company.

TETRAIODOPHTHALEIN SODIUM is the sodium salt of a dibasic dye, tetraiodophenolphthalein. It contains not less than 53 per cent of iodine. A dark blue, somewhat hygroscopic, crystalline powder, odorless. It is soluble in water and in alcohol. The aqueous solution (1:300) has a reaction of pH 7 to 9

USES.—Tetraiodophthalein sodium is used for the roentgenologic examination of the gall bladder. Following administration, the drug appears in the normal gall bladder in sufficient concentration to cast a shadow to the roentgen ray.

DOSE.—To visualize the gall bladder in a patient weighing between 115 and 160 pounds, 3 Gm. of tetraiodophthalein sodium is dissolved in 24 cc. or 3.5 Gm. of tetraiodophthalein sodium is dissolved in 28 cc. of freshly distilled water; the solution is then sterilized by heating the container in boiling water for twenty minutes. The solution is injected intravenously in two doses, one-half hour apart in the morning before breakfast.

DOSE.—Tetraiodophthalein sodium may be administered orally in the form of capsules or pills coated with phenyl salicylate. The average dose is 5 Gm., administered in five capsules or pills of 1 Gm. each during the evening meal.

THEOCALCIN is the calcium salt of theobromine and salicylic acid containing 11 per cent calcium, 48 per cent theobromine, and 36 per cent salicylic acid. In Europe theocalcin is known under the descriptive name of calcium-diuretin.

USES.—As a diuretic and vaso-dilator theocalcin possesses several advantages over the readily soluble sodium salts of theobromine, theophyllin, and other xanthine derivatives. It is more pleasant to take and less liable to cause gastric disturbance as it passes through the stomach. It is useful where long and vigorous medication is needed.

DOSE.—Chronic cardiac disease, arteriosclerosis, and angina pectoris 1 or 2 tablets of 7½ grains each three times a day. As a diuretic up to 10 tablets, or 75 grains in powder, a day may be given.
E. Bilhuber, Inc., Agents.

THEOMINAL.—Theominal is a combination of theobromin, 5 grains, and luminal, ½ grain. The amount of each constituent is based upon the

average dose that has been found effective in the various circulatory conditions in which these drugs have proved of value.

ACTION AND USES.—In the treatment of arteriosclerosis and climacteric disorders.

DOSE.—For adults, 1 to 2 tablets, once or twice daily, according to the indications.

Manufactured by the Winthrop Chemical Co., Inc.

THIOCOL (Potassium-Guaiacol-Sulphonate).—It is a colorless, crystalline powder, neutral or faintly alkaline, odorless, and having a faintly bitter taste; soluble in water, slightly soluble in ordinary alcohol, but insoluble in absolute alcohol and in ether or oils.

ACTIONS AND USES.—Thiocol-Roche acts as a sedative expectorant. It has the advantage over guaiacol in that it is comparatively tasteless, does not disturb digestion and is non-toxic.

Used in the treatment of diseases of the respiratory tract, incipient tuberculosis and certain diarrheas.

DOSE.—5 to 20 grains (0.3 to 1.3 Gm.) in solution or tablets.

Manufactured by Hoffmann-La Roche Chemical Works, New York.

THIOSAPOL, marketed in the form of a liquid or as a white ointment, is a petroleum preparation related to ichthyol. It represents the combined activity of petroleum, sulphur and alkaline soap. It is freely water soluble and therefore is easily removed from body linen. It is non-irritating to the skin. It is recommended for use in the treatment of parasitic skin diseases and in the treatment of gonorrhoea.

THORIUM SOLUTION is a clear, colorless, aqueous solution; a pyelographic medium; especially useful in making ureteropyelograms and cystograms. Supplied in two strengths; 10 per cent for cystograms and 15 per cent for ureteropyelograms. Furnished in either 100 cc. or 200 cc. bottles.

Manufactured by Hynson, Westcott and Dunning.

THYROCALX (for relief of calcium deficiencies) is marketed in tablet form having the following formulae:

Thyrocalx No. 1

Calcium lactate	5 gr.
Thyroid glands, desiccated	¼ gr.
Parathyroid glands, desiccated	1/20 gr.

Thyrocalx No. 2

Calcium lactate	5 gr.
Parathyroid glands, desiccated	1/20 gr.

Manufactured by H. K. Mulford Company.

THYROIDECTIN is a reddish-brown powder prepared from the blood of animals from which the thyroid gland has been removed.

USES.—It is intended for the treatment of disorders dependent on hypersecretion of the thyroid gland—the milder symptoms due to a slight excess of secretion, as well as the more severe disturbance, exophthalmic goiter.

DOSE.—5 to 10 grains as indicated.

Manufactured by Parke, Davis and Company.

THYROIDECTOMIZED-HORSE SERUM.—This preparation is obtained from healthy horses from which the thyroid gland has been removed. The serum is collected in the usual manner and is preserved with 0.4 per cent cresol.

USES.—It is for the same purpose as thyroidectin—that is, for the symptomatic treatment of exophthalmic goiter.

The serum is administered in water or other diluent, or it may be injected hypodermically.

DOSE.—It is usual to start the oral treatment with 25 drops three times a day, and to increase the dose by a single drop until some effect is produced upon the rapid pulse and the tremor.

Manufactured by Parke, Davis and Company.

TIARGYRIO is the name given by Paolini to a new antiseptic for the treatment of wounds. It is described as dithio-salicylate of mercury, $C_{14}H_6O_8S_2Hg_3$, and contains 53.75 per cent of mercury, 8.60 per cent of sulphur, and 37.65 per cent of salicylic acid. It occurs as a brownish-yellow powder, insoluble in water, alcohol, and ether. It is decomposed on heating. A 3 per cent ointment, prepared with vaseline, has been found useful in the treatment of eczema and psoriasis.

TONOPHOSPHAN is the sodium salt of dimethylaminomethylphenylphosphinigen acid.

In ½ to 1 per cent solution, it is injected subcutaneously in the treatment of rachitis, arthritis deformans, anemia, tuberculosis, etc.

TRIBASIC CALCIUM PHOSPHATE contains approximately 85 per cent of $Ca_3(PO_4)_2$.

Tribasic calcium phosphate is a white, odorless and tasteless powder. It is almost insoluble in water but it is readily soluble in diluted mineral acids.

USES.—It is proposed for use as antacid. It has the advantage over alkaline hydroxides such as magnesium hydroxide and alkali carbonates such as sodium bicarbonate, in that, being insoluble as of tribasic magnesium phosphate, it neutralizes the excess of acid in the stomach but does not produce systemic alkalization. It has been claimed that tribasic calcium phosphate is somewhat constipating.

DOSE.—From 1 to 5 Gm. (15 to 75 grains).

TRIBASIC MAGNESIUM PHOSPHATE contains approximately 70 per cent $Mg_3(PO_4)_2$.

Tribasic magnesium phosphate occurs as a white, odorless and tasteless

powder. It is almost insoluble in water, but it is readily soluble in diluted mineral acids.

USES.—Tribasic magnesium phosphate is an antacid. It has the advantage over alkaline hydroxides and alkali carbonates, in that, being insoluble, it neutralizes the excess of acid in the stomach, but does not produce general alkalization.

DOSE.—From 1 to 5 Gm. (15 to 75 grains.)
Manufactured by Powers, Weightman-Rosengarten Co.

TRICALCOL is a colloidal tricalcium phosphate and egg-white combination, that is a mixture of 20 per cent tricalcium phosphate with 80 per cent casein.

TRIPHAL is sodium auro-thio-benzimido-azol carboxylic acid, a light yellow powder, readily soluble in water. It contains about 44 per cent of gold. It is used in the treatment of tuberculosis in doses of 0.025—0.2 Gm. in the form of intravenous injections.

TRIVALIN is a morphine sucedaneum, the definite composition of which is as follows:

0.01935	Morphine	valerate
0.0037	Caffeine	valerate
0.00506	Cocaine	valerate

It is a light yellow, clear liquid of a penetrating valerian-like odor, and sharp, somewhat harsh taste; it is miscible with water and alcohol and does not show any chemical change through sterilization.
It is used internally, and as a local application to replace morphine and its compounds. Marketed in ampules, tablets and liquid form.

DOSE.—Hypodermically 1/2—1/1 ccm once to three times daily, internally 10—20 drops or 1—2 tablets once to three times daily.
H. A. Cassebeer, Inc., *U. S. A. Distributors,* 953 Madison Ave., New York City.

TRYPARSAMIDE.—It has been shown that tryparsamide, the sodium salt of N-phenyl-glycineamide-p-arsonic acid, possesses a marked trypanocidal activity in human trypanosomiasis caused by Tr. gambiense. Single doses of 0.5 to 5.0 Gm. produced a peripheral sterilization of lymph glands and blood in an average of 6 to 12 hours. The drug is extremely soluble in water and may be administered intramuscularly as well as intravenously. The occurrence of visual disturbances was the only untoward effect detected during the course of the administration of the drug, and was apparently related to a too frequent injection of the drug.
Tryparsamide is a colorless, odorless, crystalline powder (distinction from arsphenamine compounds). It is freely soluble in water, forming a solution

neutral to litmus. It is insoluble or only slightly soluble in alcohol, ether, chloroform, and benzene. It contains 24..6 per cent of arsenic in organic combination.

USES.—Tryparsamide is primarily a trypanocidal agent and is proposed for use in the treatment of certain forms of trypanosomiasis (African sleeping sickness and *mal de caderas*).

DOSE.—From 0.5 to 3.0 Gm. for adults, depending on the purpose for which the drug is used. In general, the dose should not exceed 0.04 to 0.05 Gm. per kilogram of body weight, and such doses should not be repeated at intervals of less than one week. Tryparsamide may be administered subcutaneously, intramuscularly or intravenously, though the intravenous administration is generally employed. The drug is dissolved in sterile water or physiological solution of sodium chloride. Tryparsamide should never be administered by mouth.
Manufactured by Powers, Weightman and Rosengarten Co.

TRYPSOGEN presents the homostimulative principles that excite the production of the internal secretion of the pancrease when the gland is functionally deficient; it contains proteolytic and lipolytic ferments; also 1/200 gr. each of gold bromide and arsenic bromide.

USES—In diabetes mellitus, glycosuria and defective carbohydrate metabolism. Also useful in certain pancreatic disorders, and as an adjunct in hypertension. *May be had without gold and arsenic.*

DOSE.—2 to 7 tablets or capsules after meals.
Manufactured by G. W. Carnrick Co.

TUTOCAIN (a brand of Butamin). Tutocain is the hydrochloride of p-aminobenzoyldimethylaminomethylbutanol, and occurs as a whitish crystalline powder. It dissolves easily in water, but sparingly in alcohol. The aqueous solutions are neutral and colorless and are not decomposed by boiling for a short time.
It is supplied in various size tablets with and without epinephrin. Solutions of tutocain with epinephrin should be freshly prepared, preferably using physiological salt solution. They can be sterilized by boiling for a short time. Solutions containing no epinephrin, after having been sterilized, remain stable for a considerable period if kept in a flask plugged with cotton. Epinephrin solution in the desired concentration may be added just before use.
Alkalies—sodium bicarbonate and soaps—should not be allowed to come in contact with tutocain solutions or with applicators or syringes.

USES—As local anaesthetic—for surface application and injection in general surgery, nose, throat, eye and ear work, and in gynecology and urology. It is commonly used in one and two per cent aqueous solutions.
Manufactured by The Winthrop Chemical Company.

U

UNGUENTUM IODAHL is a so-called stainless iodine ointment. It contains 4 per cent iodine (same iodine strength as the U.S.P. ointment), but rapidly disappears upon application to the skin, leaving practically no stain. Manufactured by Maltbie Chemical Co.

URASOL, Afsol (Acetyl-methylene-disalicylic Acid), $CH_2(C_6H_3.OC_2H_3O.COOH)_2$. Used in the treatment of muscular rheumatism and gout.
DOSE.—5 to 8 grains (0.32 to 0.5 Gm.).

UROL is stated to be a quinate of urea, $C_{17}H_{12}O_6.2CO(NH_2)_2$. It is marketed in the form of crystals and as tablets. It is used in the treatment of rheumatic affection.
DOSE.—2 to 5 Gms.

V

VOLUNTAL, or trichlorethyl-alcohol-urethane, is a new hypnotic recently introduced in Germany. It is said to be almost tasteless and soluble in water. It produces a stage of drowsiness followed by a deep, quiet, dreamless sleep, from which the patient awakes fully refreshed. No after effects are produced, and there is no evidence of cumulative action. It fails to induce sleep in presence of pain or of severe cardiac dyspnoea. As a hypnotic it stands midway between adalin and barbitone.

VI-MAL-DEX is a mixture containing, approximately, maltose, 28 per cent; dextrose, 10 per cent; dextrin, 48 per cent; orange juice sugars, 9 per cent; citric acid, 1 per cent; ash, 1 per cent; moisture, 3 per cent. One hundred Gm. contains the equivalent of 93.5 cc. (1 ounce is the equivalent of 0.85 fluidounce) of fresh orange juice.
ACTIONS AND USES.—It is proposed as a carbohydrate food for use in the feeding of infants. The antiscorbutic properties of orange juice are also present.
DOSE.—To prepare for use, vi-mal-dex (orange) is mixed with water or milk.
Manufactured by the Merrell-Soule Co., Syracuse, N. Y.

VIOFORM, "Ciba" Iodochloroxyquinolin, is the result of substituting a chlorine for a hydrogen atom in ortho-oxyquinolin and introducing one atom of iodine in the chlorortho-oxyquinolin thus obtained.
USES.—Vioform provides a sterilizable, non-irritant, odorless and permanent compound for replacing iodoform.
Manufactured by Ciba Company.

VIRILIGEN, indicated in lowered virility and sexual neurasthenia of functional origin. Presents desiccated extracts of anterior pituitary, suprarenal cortex, lymph, brain and spinal cord substances, testis and 1/10 gr. thyroid. Not sold in bulk.

DOSE.—1 or 2 tablets or capsules 3 times daily before meals.
Manufactured by G. W. Carnrick Co.

VUZIN, Iso-octyl-hydrocupreine, is a disinfectant used in treatment of wounds as a solution 0.5-1.0 per cent. (Named from Vouziers, a town in Northern France, where it was first used by German surgeons.)

W

WISMULEN is a complex ammonium-bismuth compound of oxytricarballylic acid $C_6H_{10}NO_8Bi$. A white, readily soluble, crystalline powder, used in the form of subcutaneous injections in the treatment of syphilis. It is issued in ampules.

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CIBA CO., INC.
Cedar and Washington Streets
New York

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